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PHYSICAL ABSOLUTION: PILLS, PARTISANS AND PERSPECTIVES.[1]

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THERE has been much talk of the place of psychiatry in medicine ever since it was realized that psychiatry had a place at all, but I have lately been thinking and wondering more about the place of medicine in psychiatry. I do not mean the use of new experimental drugs for mental disorders, but the day-to-day dispensing of what I call "physical absolution".

I am more and more convinced that there are very many people for whom any kind of straight psychological treatment is absolutely impossible; they can only respond to the physical methods of treatment in the more serious disorders. These people are not necessarily the uneducated types either; you find them among intellectuals of all kinds, and there are plenty in our own respected profession who will fight tooth and nail to have all the disorders of their patients labelled as physical. Rightly so, I think on the whole, though they sometimes do a lot of damage in failing to understand the depressive illnesses. Therefore, my opinion is that we, as psychiatrists, and all doctors, as far as they possibly can, should learn this technique of evaluation, accepting the fact that some patients have an ego which resists absolutely the idea of anything but physical illness; anything else is put down to weakness. The suggestion of being "neurotic" sets up a degree of anxiety which is intolerable, and therefore it is a physical illness which they need and which, in a manner of speaking, they should be allowed to have. They are mostly active people with a good working adjustment to life who feel like this, and I have always found that the proper approach must be heavily laced with a good dose of physical absolution. These people only drop their bundle seriously when they get a genuine depression; they can normally be eased back into activity and reasonable adjustment by a doctor who will take their symptoms seriously and sympathetically. As far as I am concerned, it is useless for the physician, psychosomatically inclined, to pass these patients on to me because their symptoms do not quite measure up to his idea of a genuine physical illness; at least it is useless if the physician thinks I can give these patients some vague psychological explanations about the relation of mind and matter. Some people like this kind of talk and it may be good for them temporarily; others do not, and it is our business to know the difference, practically on sight.

While I do, of course, believe in the unitary concept of mind and body for practical purposes, I am relieved that the idea of establishing some kind of psychosomatic layer in medicine as a specialty has been dropped, at any rate

[1] President's address at the federal meeting of The Australasian Association of Psychiatrists, Hobart, November 25, 1957.

here for the time being. We should indeed find ourselves in deep waters, trying to measure up the proportions of psycho to somatic, and the internecine strife about allergies, this and that and heaven knows what would be appalling. Let us, by all means, keep the treatment and approach as it is, on an approximate either-or basis, which is about the best we can manage—that is, either physical or psychological, at least until we know a great deal more than we do today.

I am not trying in any way to minimize the role of the psychiatrist; in fact I think that any doctor who does not know something of the subject does not know his job, which I believe is beginning to be realized. And I do believe that it is time the psychiatrist ceased to be the funny man in medicine. People still laugh quite a lot; I brought the house down more than once by telling my friends a while ago that I was going to Zurich to a conference of three thousand psychiatrists—the idea of three thousand of them was somehow terribly funny. Actually, the general effect turned out to be the same as any other group conference, I should think. We might as well have been oil men, dentists or retail drapers by our looks, and the conference was a very serious-minded attempt to gather and pool world opinions and views about that dread scourge, schizophrenia, in an endeavour to help and relieve these most unfortunate of patients. Not especially funny on the whole. The only side of our profession which deserves, and mostly gets, the mockery is the rich, usually female, patient on the couch, having her psyche constantly rearranged at vast expense and with little result. But the average psychiatrist deals mostly with intense mental suffering and with insanity, the side of life which is about as funny as a Greek tragedy. But that is just why people laugh, of course; the idea of insanity is unbearable and so it has to be taken lightly for the most part and called "nuts". Anyhow, we hope soon to escape the attention of those who arbitrate on these matters of comical taste.

The other side of this question of physical absolution is knowing when it is being abused. Unfortunately, this abuse is becoming very common, growing stronger with the benefits and privileges of compensation and pensions designed to help people through their bad patches. What are we to do with those who enjoy their bad patches with this compensation and dependence, more than ordinary health and independence? That is, of course, a rhetorical question, because the answer lies in the structure of human nature. It is a permanent headache, which we have bought for ourselves from presumably the best motives, and nothing will alter the fact that the more people have and are given the more they want. Not just people either, but you and I. We can only arbitrate as best we can with these medical compensation cases, hoping there will be more justice than not, or else go back to a more brutal age, in which everyone must fend for himself. Since the idea of brutality and non-protection is out of date, at least in times of peace, we cannot possibly avoid this problem of the hangers-on. All we can do is to act honestly from our own conviction in any individual case. But, just because a certain and obvious class is sponging round the doctors with escapist motives, we must never lose sight of the fact that others just as surely need this form of medical escape from time to time for a short while. By recognizing and humouring them to some extent we are enabling them to carry on as useful members of society. They are the workers, the ones who get things done, so long as they are well and not too frustrated, and they should never be turned back because they happen to have little or no psychological insight—a faculty which they can well do without, most of the time. I feel very strongly that since our profession has a monopoly on this question of physical absolution we stand or fall as good doctors, to a very large extent according to our capacity to dispense it wisely.

Let us not be weaklings, allowing the public to tell us what to do. We are in a mixed-up stage at present, when the general public, better educated and fed by what it reads, no longer sees the medicine man as a supernatural being, but, at the same time, at a primitive level, expects him to be something more than he is. There is still the craving for the great panacea at all levels, and the very suggestion of a new "wonder drug" sets the whole population aquiver with hope. We all know that there are some excellent preparations being produced at times, but most of them prove to be a little less dramatic than the first claims. Some become established as the best thing available after a long trial; others prove to have harmful side effects and out they go. Occasionally there is one which proves to be a real advance in medicine. One has lived through the rise and fall of so many. Originally received with acclaim, they gradually fall into the limbo of forgotten things, like histidine in the treatment of duodenal ulceration, sympathectomy for hypertension. Or they fall into their proper perspective and occupy their therapeutic niche, taking a much more limited place in therapy than was originally claimed, e.g., cortisone, ACTH, the sulphonamides, etc. It is not so difficult for an elderly practitioner to use his own judgement in these matters, and to deal honestly, as far as he can, with a slightly pill-crazed public; but it is more difficult for the younger man to resist what almost amounts to the demands of his patients.

A very well-seasoned friend of mine received a call one evening: Jenny has a sore throat; would the doctor please come and give her an injection of penicillin? My friend was rightly incensed at this attitude, and no doubt gave Jenny's parents "the works"—even if possibly he did come round to the penicillin injection. I do not think a great deal would be lost, even in money and patients, if every doctor, young and old, insisted on his right to give or withhold the popular new treatment. People still acknowledge and respect a certain authority in a man's profession whatever it may be.

I am well aware that my own attitude to some of the new drugs is criticized by younger men, who are better trained scientifically. I must confess that I have been somewhat dubious over the last few years since I realized that biochemistry was beginning to assume as great, if not greater, importance than anatomy and physiology in the curriculum. I am an old fool who does not know his biochemistry, etc. Well, never mind about the old fool, but they are right about the biochemistry. I know very little about it, but I do know that the body has a natural balance of its own, and that frequently what you gain on the swings you can lose on the roundabouts. It is new and exciting, sometimes dramatic, to see what is gained on the swings, but it takes a long time, and is rather dull meanwhile, waiting to discover the kicks of the roundabouts. Just the same it is our plain duty and the duty of the drug houses, not to be carried away too soon by too few cases.

Almost every day we are peppered with advertisements extolling the virtues of some new wonder drug, which has often been produced and marketed without adequate research, and, in point of fact, investigation may have been made by enthusiastic protagonists, frequently on a statistically valueless number of cases. Sometimes it can take twelve months or more of general use by the profession before a therapy falls into its proper clinical perspective. We are going through a phase of testing many such drugs at the present time. The mode of action of the drug is frequently not understood, and the side effects, which in some cases may be very serious indeed, are either not mentioned or are very much written down. Medicine and drugs are news these days, and even the public Press takes on the role of informant, and in doing so frequently misleads the public.

Symptomatic treatment has become the order of the day, and the problem of the disease is often forgotten or neglected in the treatment of the symptom. In many instances the ætiology is doubtful or unknown to us, and we do not know whether the disease itself is not merely the symptom. We do not have to go very far back to remember that at one stage, before we discovered pneumonia, fever was considered to be the disease and was treated as such. And it is sometimes the case that

even when we recognize the symptom as a symptom, and treat it in an attempt to relieve the patient, the effects are unpleasant for him and may even prove disastrous. Perhaps this is due to the feeling (which we should not allow ourselves to have) that we must do something for the patient. And this is not, by any means, always due to the patient's demands. How often would it be better to leave the patient alone, fortified perhaps by a quiet reassuring explanation? A case in point, which is of interest to the psychiatrist, is the recent management of hypertension.

This form of treatment is almost entirely symptomatic, and is designed to reduce the level of the blood pressure and maintain it at a lower and "safer" level, most commonly by the use of hypotensive drugs, such as reserpine or the sympathetic blocking agents and so on. Some two years ago I wrote to our journal about the psychiatric dangers of the use of the drug, reserpine, which was and is so commonly used in the management of hypertension. This drug does have side effects, which cause the patient discomfort. These may be merely "stuffiness" in the nose, interference with the water balance, causing an uncomfortable feeling of "fatness", drowsiness and motor retardation; the patient's own description is that he feels wretched. And in the ulcer patient it has been known to activate the ulcer and cause massive hæmorrhage. However, from the psychiatric point of view, it can also produce varying degrees of depression, and in the manic-depressive type of personality or in an early depressive illness it can produce an acute state of affairs, which is not infrequently associated with suicidal attempts or actual suicide. I have seen many such cases. What happens frequently is that a mildly depressed middle-aged or elderly patient feels off-colour and consults his local doctor. In routine examination nothing is found other than a moderate and harmless hypertension. (This, of course, is very common in the manic-depressive perfectionist type of person, whose systolic pressure is frequently raised, and indeed because of the anxiety and agitation associated with his depression it is almost invariably raised above his normal level.) The patient is given a small dose of reserpine three times a day, the depression becomes acute and suicide becomes more than a distinct possibility. As the depressed patient almost invariably suffers from an early-morning insomnia, sedative pills have usually been prescribed as well. And so the stage is set. As an example one may quote a recent case.

The patient was a woman in her early sixties. She was mildly depressed and felt off-colour, so she consulted her local doctor. Nothing was discovered other than a mild hypertension. Reserpine was prescribed as a hypotensive and she was given sleeping tablets for her insomnia. Ten days later she was admitted to hospital in coma, having swallowed all her sleeping tablets in a suicidal attempt. She was recovered with difficulty from her coma, her depression was relieved with active treatment and she resumed her normal routine again. Believe it or not, 16 months later she again felt off-colour. She consulted another practitioner, again she was placed on reserpine and given sleeping tablets, and was again admitted to hospital in a rather more desperate coma than her previous one. Actually she survived and was again relieved of her depression by physical therapy.

However, one did feel, on her discharge from hospital, that one would like to tattoo both her arms above the elbow with a warning against taking this woman's blood pressure.

The sympathetic blocking agents and drugs which act on smooth muscle are also used in an attempt to relieve hypertension, and these can also be associated with a wide variety of most uncomfortable side effects, including bowel and bladder crises and so on. I have very serious doubts about the value of these forms of symptomatic treatment of progressive and irreversible hypertensive disease. It seems to me that we are attacking the disease by interfering with the body's physiological compensatory mechanism to maintain the circulation. Over the past fourteen months I have seen four of my contemporaries die of this disease, their last twelve months being spent in a state of wretchedness and anxiety, largely as a result of the side effects from their treatment. A colleague who has had one or two hypertensive crises and a couple of retinal hæmorrhages said to me only the other day: "I have had a wretched year, but four weeks ago I gave away all the drugs except a quarter of a grain of phenobarbital, night and morning, and a glycerobarbital at night, and for the first time for nine months I now feel well." And a senior physician friend of mine said to me, semi-seriously, quite recently, that he thought it should be considered to be an offence to take the blood pressure of anyone over the age of 55 years. Maybe I seem to be labouring the point, but the psychiatrist still sees far too many iatrogenic disasters.

And now what of the so-called new drugs—the ataractics or the tranquillizers? These drugs, principally rauwolfia products, usually in the form of reserpine, and the phenothiazines, such as chlorpromazine, promazine, and so on, have latterly been used in the treatment of that cancer of psychiatry—schizophrenia. And it is said that they have revolutionized the treatment and management of this type of patient. Since their advent, we are told that we "wouldn't know" the back wards of the mental hospitals. In other words, the difficult, impulsive, aggressive and dirty cases, which were unmanageable without physical restraint, now become tractable and amenable and no longer require restraint—apart, of course, from these chemical straitjackets. It is even said by some of the enthusiasts that these patients are cured in the sense that on maintenance doses they may be discharged and live outside the hospital. I understand that a remission or cure rate of something like 30% is claimed in some quarters. However, in putting forward these claims, I think it is often forgotten that approximately 30% of these patients have a spontaneous remission, irrespective of what treatment is given, or even if they have no treatment at all. But the hard core remains. Actually, this form of treatment is entirely symptomatic, and the patient usually relapses after cessation of the treatment. Only last week I was asked to see a young man, 28 years of age, in one of the surgical wards, who had cut his throat almost from ear to ear. This boy, a schizophrenic, had been admitted to a mental hospital some time previously, where he was treated with the new drugs. As a result of these his psychosis was submerged and he was later discharged from the hospital on maintenance doses. Whilst living outside the hospital he stopped taking his drugs, his psychosis re-emerged in florid fashion and he obeyed the behest of the "voices" that he should destroy himself. On his recovery from his self-inflicted injury, he was, of course, returned to the mental hospital, but one cannot help thinking that this is learning the hard way for everyone concerned. The patients are indeed more easily managed, older forms of restraint are no longer required, the wards are quiet and the nurses and staff are relieved. But what of the patient? For instance, the paranoid sits quietly in a corner mumbling his threats instead of shouting them and wildly gesticulating. And it must be recognized that these are dangerous drugs and that they can produce unfortunate side effects. We do know something of the peripheral effects of these drugs, but we know little or nothing of their central effect on the brain, or what damage may be caused centrally by their long-continued use. All we do know is that it acts on the base of the brain, probably in the region of the basal ganglia and on the visceral connexions between the hypothalamus and the reticular substance. We know that these drugs can reduce a patient to a state of parkinsonism, which is fortunately reversible when the drug is suspended. It seems to me that the central effect of a drug, which can reduce a patient in a maniacal frenzy to a state of stunned stupidity, or conscious coma if you prefer it, must be very drastic indeed.

We really do not know what we are doing with these drugs. As Truitt says: "We do know some of the peripheral effects, but the long-range effects in the brain on the emotions, memory, motivations, ego-conditioned responses and other higher functions, are not, as yet, understood.

And so we must exercise caution whilst we lack a rational basis for their action."

Now that the first wave of enthusiasm is passing, some of us, I hope, are asking ourselves several questions. A very thoughtful article by Thomas Szasz on this subject was published last year in the *Archives of Neurology and Psychiatry*. First, whom do we treat by these methods—the patient, or ourselves and the depleted hospital staffs, nurses and wardsmen? It must be admitted that it is much easier for the hospital staff to produce quietness and peace in the wards by handing out pills than by attempts to gain a remission or cure by using more highly technical, difficult and dangerous methods, such as insulin-coma therapy and so on, which demand a highly trained and competent staff. But are we helping the patient as much as we are helping others? Secondly, what is the distinction between physical restraint and the chemical camisole, except perhaps that it makes us feel less guilty? Thirdly, are we justified, ethically, in using this form of treatment to control deviant behaviour, by what Marlow would call "medication with submission"? Fourthly, what are we doing to the patient? Presumably we are treating the symptoms of his mental illness, if indeed it is a mental illness. We are treating his aggressiveness and his combativeness and making him more amenable and tractable to hospital management, or for auxiliary therapies, in the hope that by relieving the manifestations it may lead to a readjustment of the whole person, that is, a cure. Lastly, one cannot help wondering about those patients who become tractable and amenable, and who seem sufficiently so to be sent home from the hospital under maintenance doses of the drugs. These patients have been admitted to hospital under certificate, and most likely a poor prognosis has been given. The patient may have been in hospital for a long time, and the whole atmosphere of his former environment has been adapted to his absence. And then the patient is brought back and a new family orientation is demanded. One can readily imagine the disruption of receiving such a patient who must be fitted in, who is still on maintenance doses of drugs and who must be supervised, in part at least; who is really not his former self and for whom there is no certainty that he will stay well. He will have to be returned to hospital regularly for check up and supervision of his drug therapy, and there is always the possibility of relapse and that he may have to be returned to hospital. One sees many of these family disruptions occur. But how can a family refuse to receive a superficially well patient back into the home, when they have already felt so guilty at having the patient certified in the first place? And if the patient does relapse or refuse to take his pills, the family, quite frequently, are loath to send him back to hospital, and a false sense of duty creates a horrible and almost impossible problem for them.

Surely there should be intermediate rehabilitation centres, properly equipped and staffed, that these patients could go to for a sufficiently long period of observation and training, for thorough investigation of their background and so on, with the object of proving with some certainty that the patient will be fully capable of managing himself in the future and be able to take a reasonable place in his former environment. One wonders, of course, who is to provide all this. There are still plenty of mentally ill patients admitted to hospital, despite the fact that most of them have already been through the gamut of the ataractic and other drugs. As Bleuler said many years ago:

> It is an old and self-evident observation that the more remedies recommended against a disease, the more certain it is that not one of them is efficacious; if there were one that was more or less certain to cure, the others would be abandoned of themselves. So that as regards the many ailments against which many remedies are recommended we must ask ourselves: would it not be better, or at least equally good, to do nothing at all? Which question is, strangely enough, seldom asked, nor has anyone hitherto found an answer.

Apropos of this a great number of treatments, from psychoanalysis, new drugs and full coma insulin, to psychosurgery were discussed at Zurich. And whilst still on the subject of Zurich, it was interesting to note that of the 66 speakers on the "New Drugs" only one was an Englishman.

It is astonishing how difficult it is to do nothing for a patient. For a long time we psychiatrists hoped that, as our profession gained in insight and the public became more mature, we would need to lean less and less on the pill and the bottle. But now to our chagrin we find the profession and the public more pill and medicine conscious than ever. It is depressing to give a painstaking explanation to an intelligent patient, only to have him say at the close of the interview: "Well now doctor, what about the tranquillizers, or a good strong tonic?" As I said earlier, this is where our intuitive evaluations should come in. The psychiatrist must constantly remind himself that he is supposed to be some years ahead of his colleagues in this kind of thinking, and perhaps fifty years ahead of the public.

The universal use of these so-called tranquillizers for less serious nervous disorders has created another major problem today. A tranquillizer has been defined as a drug which makes a person feel better when he is tense. They are also referred to as the "happiness pills". They usually go under three names; the full chemical name, a shorter and more convenient name and finally the proprietary name: e.g., the chemical name of one is 2-methyl-2-n-propyl-1,3-propanediol dicarbamate; its abbreviated name is meprobromate, and two of its proprietary names are "Miltown" and "Equanil".

The present-day consumption of these drugs is quite fantastic. The Committee of Public Health of the New York Medical Centre quotes the American Psychiatric Association's report that over 35 million prescriptions for tranquillizers were written in America in 1956. And repeats may be obtained without fresh prescriptions. They also report that of 10 compounds most frequently used by physicians in 1955 three were tranquillizers. And this was in the early days of these drugs! The treatment of the anxiety states, tension and the like, has always been a very difficult problem; anxiety, tension and worry have always been with us and always will be. It is the price we pay for being civilized, or for being human beings at all, and it is our capacity to modify instinctual behaviour and to tolerate the resultant frustration and anxiety that places us above the level of the lower animals. The demand to be free of it is common to all of us, but tranquillity and happiness lie within the self and are not to be found in a bottle. One remembers, not so very long ago, that preparations of the vitamins, B_{12} in particular, were to provide the answer to many minor nervous disorders. Later the sedative barbiturates held sway, but because of the risks of side effects, addiction and so on they had to come under legal control. The reverse effect of stimulation and "pepping up" arrived with the lavish prescription of the amphetamines. Then the antihistaminics were squeezed in, and now it is the tranquillizers, on an even bigger and worse scale.

The following is a quotation from the report of the Committee on Public Health of the New York Academy of Medicine. The Committee was asked by the Commissioner of Health of New York City whether the widespread use of the tranquillizers constituted a menace to public health; and secondly, whether the literature about the drugs sent by pharmaceutical firms to physicians contributed to their improper use. The report states:

> In some minds this widespread use of tranquillizers in meeting everyday situations raises a question about the rationale underlying it. Anxiety and tension seem to abound in our modern culture and the current trend is to escape the unpleasantness of its impact. But when has life ever been free from stress? In the long run, is it desirable that a population be ever free from tension? Should there be a pill for every mood and occasion? It has been noted that when the drug is used satisfactorily in an emergency, there is a tendency among some persons to regard more and more of life's situations as emergencies, until the pattern results in their everyday use of tranquillizing drugs. Their use

is said to be becoming more and more common among persons in certain occupations.

Unfortunately, or possibly fortunately, anxiety and stress are not so easily overcome, but keep recurring and pricking us, despite the use of these chemical attempts to produce a heaven on earth. These drugs appeal to the dependence in all of us, and it is a gross regression which is to be resisted to the utmost, or we are likely to deteriorate into a race of dependent addicts.

Nor are the side effects of these drugs to be ignored. Friedman and Marmelzal reported that adverse reactions after the administration of meprobromate included cutaneous effects, which were chiefly purpuric with intense itching. Next in frequency was the production of excitement, rather than the desired tranquillization. Severe diarrhœa and temporary paralysis of the extraocular muscles also occurred, producing diplopia.

Who is responsible for this over-all situation? Is it the professors and teachers in our medical schools? I think not. The teaching in our medical schools is of a very high order indeed. Actually, in fact, it would be almost impossible for the teachers to keep pace with the products of the drug houses, or to do local clinical research on them, when one realizes that in America in 1952 there were no less than 140,000 medicaments on the market and that 14,000 were added in 1953 alone. Is it the fault of the doctor in prescribng them? Primarily I suppose it is. At the same time very powerful forces and extremely subtle influences are brought to bear on him, through the advertising drug houses, Press announcements and public demands. We may laugh in a superior way when we remember that it used to be said that nowhere was it easier to sell a gold brick than in Collins Street or Macquarie Street. But this is just what is happening today. Drugs via medicine have become big business. Very big business indeed when one realizes for instance how many tons of aspirin are manufactured in Australia annually, that 35,000,000 prescriptions for tranquillizers were written in America in 1956, and so on.

The drug houses are invaluable to us and to the community in producing and marketing such things as the sulphonamides, the antibiotics, insulin, anæsthetic drugs, polio vaccine and a host of everyday necessities in medicine. We cannot live without these large firms, but they are becoming, in some respects, increasingly difficult to live with. It is quite impossible to keep track of all the new drugs and their actions, their uses and abuses, from the literature and from our own journals. But the practitioner is bombarded daily with literature of a very insidious kind on these extremely diverse products. The quality of the paper on which they are printed, the photography and illustrations are of exceptional quality, and the general arrangement comes from the brains of the most highly skilled technicians in advertising. This advertising covers the "ethical pharmaceuticals", so called because they are advertised solely to the medical profession. Some of the individual firms produce their own monthly journals, and we are sent "for free", as they say, other very well done journals of abstracts from world literature. The publication of these is being paid for, I imagine, by the advertisers.

In brief, we find ourselves in the anomalous position of being educated by the drug houses. Money is supplied for research, a particular drug is kindly donated by such-and-such a firm and an investigation is made, frequently by an able clinician, but possibly one untrained in research. The results may be published in a medical journal and the article is subsequently referred to in the advertisements. And so on and so on. There is nothing reprehensible about it, but it is often misleading. A good deal of it is good sound stuff from the good ethical companies, but a lot of it is distorted and extravagant.

To quote again from the Committee of Public Health of the New York Academy of Medicine:

> Such literature may be misleading in two respects. First, it may recommend a product in such a way as to lead to, if not encourage, its indiscriminate use. For example, a leaflet accompanying one tranquillizing drug lists under indications an almost endless number of situations and conditions of emotional stress at every stage of life: hyperactivity, irregular sleeping habits, nightmares and homesickness in children; the various circumstances in adolescence which give rise to severe anxiety and tension; in adulthood, apprehension and anxiety over finances, effects of excitement or misfortune in the family such as sickness, accidents, weddings, funerals, separations and differing opinions. The drug is also said to be indicated in times of occupational stress, such as anxiety over interviews, competitive examination, or public appearances. Thus it is recommended for actors and actresses, radio and television performers, business executives, toastmasters, ministers, teachers, professors and politicians. It is reported to be useful in the journalistic and advertising field, with its tension, excitement and noisy environment. The indications also include competitive sports.
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> Secondly, some manufacturers' literature which is distributed to physicians and pharmacists contains too frequently little or no mention of the side effects and contra-indications to the use of the tranquillizers. In one instance it is stated that the drugs are recommended for relatively short term therapy, and temporary conditions where emotional stress is a complicating or a causative factor. Most revealing is the assertion that investigations are under way to determine the safety and efficacy of the drugs during prolonged use. The failure to mention possible side reactions, contra-indications and potential dangers, or to devote a disproportionately small space to them, is likely to be highly misleading to the physician.
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> Manufacturers' literature on new drugs is presumed to guide the physician, not mislead him. Undoubtedly it will colour the physician's attitude toward the drug, his use of it and his recommendations concerning it. Ultimately it affects in part the patient's attitude towards the use of the drug. When it is remembered that the physician may obtain his first information about new drugs from this kind of literature, its validity and the need for a cautious approach become a matter of high importance.
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> The lay press has contributed its share to disseminating premature and incomplete accounts of the miraculous effects of the more dramatic new drugs. This practice has had its effect upon the public, and ultimately both directly and indirectly upon the medical profession. From such journalism persons may obtain false impressions and exert pressure on their physicians to prescribe the tranquillizing drugs.

As an example, a colleague asked me what the feeling was at Zurich about the use of the derivatives of isoniazid in the treatment of schizophrenia. My colleague explained that she asked the question because the relations of three of her patients had read about this treatment in an American magazine, and they wished the patients to be given this form of treatment. I had to confess that I had never heard of it.

Through its Committees on Research, Therapy and Public Information, the American Psychiatric Association has urged avoidance of premature and unreliable reports because they violate the standards for testing new therapies. It advised:

> The full cooperation of the profession in accumulating a body of tested scientific data about the drugs is of prime importance. At the same time, it is important to be aware of subtle pressures that combine to foster public misunderstanding and misuse of the drugs. There is the eagerness of the public, and of physicians themselves, for "good news" about a new treatment for psychiatric disorders. This tends to foster popular stories based on optimistic reports of early and limited research findings with the drugs, before such findings can be reproduced and validated by other colleagues. Persons engaged in any form of research or evaluation of therapy should be most dispassionate and objective in their pronouncements. It is suggested that members of the Association be particularly alert to personal pressures (both internal and external) and circumspect in their announcements of early experimental results with the drugs.

It seems to me that it would be more straightforward if the drug houses, at this stage, were to preface their remarks by stating that the high hopes that were held for the universal use of the tranquillizers have not been

realized. But they do have a use and the indications would now appear to be so and so. And perhaps in equally large type, that the dangers of side effects are such and such. Maybe this would be expecting too much. And I have also wondered if, in the public interest, it would be possible to establish an honorary committee of top consultants to whom the Press could refer their medical articles and Press notices for opinion as to their validity and suitability for public consumption.

Finally, while we are on the subject of this present stage of medicine in general, Arthur Proetz in his Wherry Memorial Lecture of last year, which incidentally every practitioner should read, quotes a paper by David Barr of Cornell on the "Hazards of Modern Diagnosis and Therapy", in which he points out the dangers of the indiscriminate use of new and unfamiliar drugs, and especially the effects of modifying the internal invironment by multiple diagnostic and therapeutic procedures simultaneously applied. He writes:

> A seriously ill patient or one who has been subjected to a major operation may receive twenty to forty different drugs in addition to numerous mechanical procedures. His management may actually require the use of anæsthetics, sedatives, narcotics, antibiotics in variety, phenylephrine (neosynephrin) hydrochloride, arterenol, digitalis, diuretics, bishydroxycoumarin, cortisone, transfusions, infusions and finally antihistaminics, either for the correction of symptoms of his disease or to combat the toxic manifestations of other drugs. Since such combinations of measures and medicine are frequent, it is not surprising that iatrogenic disturbances are frequent.

He reports that, in a period in which approximately one thousand patients were admitted to a large hospital, "more than fifty major toxic reactions and accidents were encountered". Some of these were the cause of hospitalization, others occurred in the wards. It seems to me that we are tending to be blinded by science.

Proetz believes that, although not directed at the medical profession, a remark of Eisenhower's may be to the point: "The great genius is the man who can do the average thing when everybody else is going crazy." I think he might have added: "But it may not pay as well!" And if I may quote Proetz's final sentence: "I have read somewhere that the latest wonder drug is so powerful you cannot take it unless you are in perfect health!"

However, there is one thing of which we can all be safely assured—that any drug or treatment which is new, which proves to be safe and a real advance in therapy, will inevitably take its honoured place in medicine.

MORTALITY FROM HYDATID DISEASE IN VICTORIA, 1853 TO 1956.

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IN considering the mortality rate of a chronic disease the most useful method is the age-specific mortality rate, in particular the cohort or generation method of presentation. In this survey the cohort method is used, and the incidence in Victoria of hydatid disease from the first recorded cases to those of the present day is studied. The crude mortality rate, as will be explained later, owing to salting by older age groups, does not show so readily any marked improvement which may result in a chronic disease. For this reason various writers have not realized that hydatid disease is a diminishing problem in Victoria.

I wish briefly to deal with the historical background of the disease. Dew (1928), in his writings, mentions the following salient points. First, that hydatid disease has been known to man since earliest times; Hippocrates (460 to 379 B.C.) states: "When the liver is filled with water and bursts into the epiploon, in this case the belly is filled with water and the patient dies." Secondly, in 1863, Naunyn in Berlin and Krabbe in Iceland independently proved the life cycle by animal experimentation. They were able to infect dogs with scolices derived from human sources, and were able to infect lambs with the ova of the tæniæ thus obtained. This work was confirmed by Thomas in 1883. The first complete and accurate account of the life history and morphology of the parasite was by Leuchart in 1867. Thirdly, surgical techniques for the treatment of hydatid diseases reached some degree of standardization during the years 1890 to 1910 in Australia. Casoni in 1911 introduced his test as an aid to clinical diagnosis.

As well as the brief historical background given by Dew it is interesting to note other developments. Mortality records kept by the Victorian Government Statist extend back to 1837. However, these earlier records are Church records: the first records compiled by the Government Statist, as the result of legislation requiring notification of death and cause, were in the year 1853. In the year 1862 the first deaths from hydatid disease are recorded; they are four in number, neither sex nor age being given.

TABLE I.
Cases of Lung Cysts in Victoria, 1949 to 1956.

District.	Cases.	Percentage.[1]
Metropolitan	134	39
Northern	30	8
Western	75	21
Eastern	17	5
North Eastern	27	8
North Western	58	17
Total	341	—

[1] Fractions have been neglected in this column.

In 1863 the deaths from the condition of three males and two females are recorded, but no ages are given. In 1864 the present quinquennial age groping and sex differentiation were introduced. In 1890 a consolidating Act regarding butchers and abattoirs was introduced into the Victorian legislature. This Act presumably was intended to prevent cattle-stealing, as the inspector's duties were largely concerned with recording descriptions of stock killed, brands on hides and other related details. In 1900 the *Meat Supervision Act* was passed, and Melbourne became a meat area with its first meat inspectors; Geelong shortly afterwards became a meat area. Since that date, proclaimed meat areas in Victoria have gradually increased in number; but as yet the whole of Victoria has not been proclaimed a meat area. On July 26, 1926, hydatid disease was made a notifiable disease in Victoria.

Animal Surveys.

Dew (1928) refers to several surveys made to inquire into the incidence of the disease in stock and dogs. Gemmell (1955 and 1957) also reports on a series of surveys made in New South Wales. Dougan (unpublished) made a survey of dogs in Victoria. The results of these more recent surveys indicate that the rate of infestation in stock is in the region of 28% to 40%. In rural districts the rate of infestation in dogs is correspondingly high, but in city dogs it is only between 3% and 4%.

Incidence of the Disease in Man.

Sources of information are the following: (i) The register of notified cases as published in the Victorian Health Commission's Annual Reports and in the Health Bulletin; (ii) the register of deaths supplied by the Government Statist of Victoria; (iii) the Australasian Hydatid Registry kept by the Royal Australasian College of Surgeons; (iv) the results of mass X-ray surveys as supplied by the Deputy Director of the X-Ray Survey Division; (v) the records of the major hospitals in Victoria. Cole (1945 and 1955) reviewed all these sources except the records of the major hospitals and stated that

the mortality had decreased; but he considered the morbidity to be much the same since 1915. The Australasian Hydatid Registry, which was started in 1930, has not been kept up to date since the death of Sir Louis Barnett. Records of the major hospitals in Victoria are submitted to the Victorian Health Department from time to time. However, hospital records have not been accurately kept over the full period of this survey. Notification of cases has been required since 1926, but unfortunately not all cases are notified, and also several cases are being notified for the second and third time. Figures from this source are difficult to assess.

For the period 1927 to 1944, 138 cases were notified, and 104 for the period 1945 to 1954. In the years 1954, 1955, and 1956, 18, 11 and 13 cases respectively were notified.

cases in Victoria. Here, again, we are dependent upon accurate diagnosis, as autopsy is not performed in every case.

However, these records are the most accurate obtainable, because every death must be notified, and they extend for over 100 years. To quote William Farr, the father of statistics: "death is the only certainty".

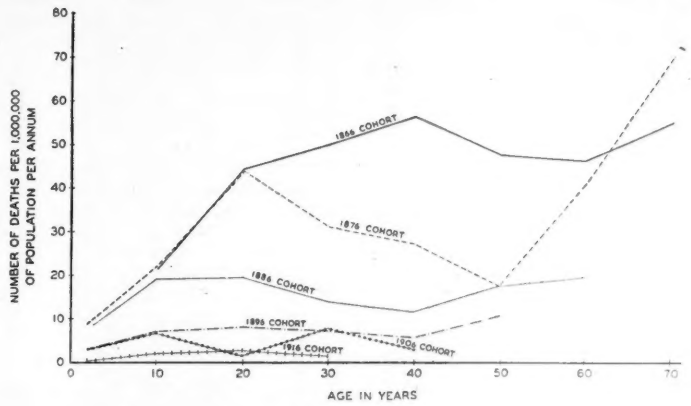

FIGURE IA.
The death rate of males from hydatid disease in Victoria (cohort method of presentation).

Statistical Presentation of Mortality Rates.

There are several methods of statistical presentation of mortality rates.

1. The actual number of deaths. During the years 1853 to 1956 there were 2782 deaths of 1574 males and 1204 females; the sex was not stated in 1862 for the four persons whose deaths were recorded. Ages are not recorded in 1863. The youngest was in 1867—one female in the six

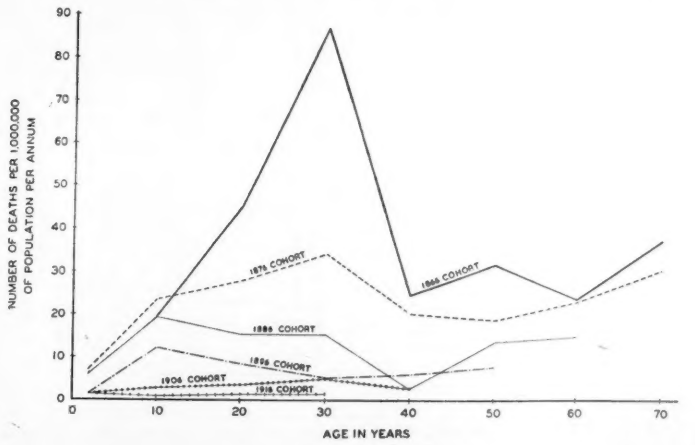

FIGURE IB.
The death rate of females from hydatid disease in Victoria (cohort method of presentation).

Mass X-ray surveys in the period 1949 to 1956 discovered lung cysts in 204 males and 137 females. These patients were not followed up, so we can only guess what percentage of cysts were in fact due to hydatid disease. These cases were distributed in Victorian health districts as shown in Table I.

One is therefore left with the register of deaths as the only means of arriving at some idea of the incidence of to 12 months age group. The greatest total of deaths due to hydatid disease in a single year for females was in 1897, when 40 died, and for males in 1893, when 41 died. From Table II it becomes evident that, since 1920, people under 40 years of age, particularly females, are not dying from hydatid disease in such numbers as formerly. However, such tables give no indication of the population at risk and are therefore of limited value.

TABLE II.

Total Deaths from Hydatid Disease in Victoria by Age Groups, 1864 to 1956.

Age Groups. (Years.)	1864 to 1870.	1871 to 1880.	1881 to 1890.	1891 to 1900.	1901 to 1910.	1911 to 1920.	1921 to 1930.	1931 to 1940.	1941 to 1950.	1951 to 1956.	Total.
Males.											
0 to 4 ..	4	5	5	2	2	0	1	1	3	1	24
5 to 14 ..	5	22	25	25	9	9	3	3	3	0	104
15 to 24 ..	8	20	46	50	23	10	2	4	0	0	163
25 to 34 ..	16	30	55	50	29	15	9	11	2	0	217
35 to 44 ..	30	45	37	34	47	24	12	7	4	1	241
45 to 54 ..	22	48	59	35	38	36	15	18	13	7	291
55 to 64 ..	3	26	48	49	22	35	30	31	18	3	266
65 to 74 ..	1	12	15	26	20	18	20	26	38	7	183
75 and over	0	3	4	6	8	4	7	17	23	10	82
Total ..	89	211	294	277	198	151	99	118	104	29	1571
Females.											
0 to 4 ..	2	4	4	1	1	1	0	0	1	0	14
5 to 14 ..	12	20	27	25	16	4	1	0	0	0	105
15 to 24 ..	11	39	48	33	19	11	5	2	3	0	171
25 to 34 ..	12	42	65	85	35	18	7	7	2	0	273
35 to 44 ..	16	25	33	40	20	19	3	8	4	2	170
45 to 54 ..	3	26	37	40	20	24	17	15	10	3	195
55 to 64 ..	1	9	16	23	12	25	16	19	15	2	138
65 to 74 ..	0	0	7	15	8	8	13	20	20	3	94
75 and over	0	3	0	3	5	5	4	7	10	5	42
Total ..	57	168	237	265	136	115	66	78	65	15	1202

TABLE III.

The Number of Deaths from Hydatid Disease per Million per Annum by Age Groups, 1871 to 1950.

Age Groups. (Years.)	1871 to 1880.	1881 to 1890.	1891 to 1900.	1901 to 1910.	1911 to 1920.	1921 to 1930.	1931 to 1940.	1941 to 1950.
Males.								
0 to 4	8·6	7·5	2·8	2·9	0·0	1·3	1·2	2·9
5 to 14	21·4	21·6	19·0	6·7	6·4	1·9	1·9	1·8
15 to 24	28·7	44·0	43·6	19·2	7·8	1·4	2·6	0·0
25 to 34	53·8	69·1	49·7	30·7	13·7	6·9	7·6	1·2
35 to 44	73·8	71·5	49·2	56·1	26·8	11·2	5·5	2·7
45 to 54	103·3	121·6	82·3	65·9	47·2	17·2	17·3	10·4
55 to 64	121·4	141·7	139·5	69·1	73·0	46·0	41·0	19·6
65 to 74	162·0	109·5	114·4	82·1	80·1	58·9	54·9	70·0
75 and over	152·4	100·6	85·4	64·4	29·3	49·6	79·5	82·3
Females.								
0 to 4	7·0	6·2	1·4	1·5	1·4	0·0	0·0	1·0
5 to 14	19·7	23·6	19·4	12·1	2·9	0·7	0·0	0·0
15 to 24	52·8	44·9	27·9	5·2	8·3	3·5	1·3	1·9
25 to 34	85·6	90·7	86·9	34·1	15·2	5·2	4·8	1·2
35 to 44	59·4	73·0	64·2	24·4	20·1	2·6	6·0	2·7
45 to 54	95·5	100·8	102·3	37·3	31·9	18·7	13·8	7·9
55 to 64	73·1	71·0	78·7	38·6	52·8	23·6	23·0	14·8
65 to 74	0·0	76·8	87·9	35·7	33·0	35·2	37·3	30·5
75 and over	214·1	0·0	55·6	44·0	33·4	23·1	26·2	26·5

TABLE IV.

Mortality from Hydatid Disease in Victoria, 1871 to 1950: The Mortality Rates from Hydatid Disease for Victoria Rearranged to Give the Presumed Mortality Experience of Successive Generations (or Cohorts). The Rates of Mortality at Each Age are Given per Annum per Million Persons at Risk.

Age. (Years.)	(A) Males: Cohorts Born in the Year								(B) Females: Cohorts Born in the Year							
	1866.	1876.	1886.	1896.	1906.	1916.	1926.	1936.	1866.	1876.	1886.	1896.	1906.	1916.	1926.	1936.
10	21·4	21·6	19·0	6·7	6·4	1·9	1·9	1·8	19·7	23·6	19·4	12·1	2·9	0·7	0·0	0·0
20	44·0	43·6	19·2	7·8	1·4	2·6	0·0	—	44·9	27·9	15·2	8·3	3·5	1·3	1·9	—
30	49·7	30·7	13·7	6·9	7·6	1·2	—	—	86·9	34·1	15·2	5·2	4·8	1·2	—	—
40	56·1	26·8	11·2	5·5	2·7	—	—	—	24·4	20·1	2·6	6·0	2·7	—	—	—
50	47·2	17·2	17·3	10·4	—	—	—	—	31·9	18·7	13·8	7·9	—	—	—	—
60	46·0	41·0	19·6	—	—	—	—	—	23·6	23·0	14·8	—	—	—	—	—
70	54·9	70·0	—	—	—	—	—	—	37·3	30·5	—	—	—	—	—	—

2. Crude mortality rates. In this method the number of deaths are divided by the total of the population at risk and multiplied by a million, the result being expressed as "x" per million per annum. Such a method enables comparison of differing populations, but does not give any indication of the mortality rate in particular age groups. This method has been the usual form of presentation.

3. The age-specific mortality rate. This method indicates the mortality rate of different age groups; hence it is of greater value. Table III gives the age-specific mortality rate for hydatid disease in Victoria from 1871 until 1950 over ten-year periods.

In assessing mortality records of a chronic disease, where these records extend over a long period of time, the cohort (or generation) method is the one best suited to indicate graphically any changes due to improved treatment or other factors. This method is fully explained by Frost (1939) and by Lancaster (1950). The basic concept is as follows: suppose we consider a group of people born in 1866, in 1876 they will be represented by the age-specific mortality rate for the five to 14 years age group, in 1886 by the 15 to 24 years age group and so on. Table IV sets out the cohort figures in this survey.

Comments.

From the graphs (Figures IA and IB) it will be noted that the mortality rate has dropped considerably. To what do we attribute this improvement? Referring again to the historical background we note the following facts: (i) better surgery in the period 1890 to 1910; (ii) meat supervision in 1900; (iii) greater education of the general public from 1890 onwards. In my opinion the cohorts for 1896, 1906 and 1916 show the effects of these three factors.

Dungal (1946), in Iceland, approached this problem of incidence from another aspect. During the period 1930 to 1944 inclusive he performed a series of 1231 autopsies. Among these he discovered that 34 males and 26 females had suffered from hydatid disease. His results are shown in Table V. He did not perform autopsies on still-born children or on those under 14 days old.

TABLE V.
Dungal's (1946) Results in Iceland.

Age (Years).	Total Autopsies.	Echinococcus Cases.	Percentage.
0 to 20	239	0	0·0
21 to 30	193	1	0·5
31 to 40	199	1	0·5
41 to 50	170	4	2·4
51 to 60	179	13	7·3
61 to 70	153	21	13·7
71 to 90	98	20	20·0
Total	1231	60	4·9

He attributes Iceland's improvement in the incidence of the disease to: (i) education; (ii) the supervision of slaughtering; (iii) the dosage of dogs (an annual requirement); (iv) the change in the age of sheep being slaughtered.

It is interesting to compare the cohorts for 1896 and 1906 with the results in the age groups 41 to 50 years and 31 to 40 years in Dungal's series.

Conclusion.

There has been a marked decrease in mortality from hydatid disease in Victoria. The age-specific mortality figures show that crude mortality figures for Victoria in the period 1941 to 1950 are heavily salted by patients in the older age groups.

Acknowledgements.

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GROUP MANAGEMENT OF THE ALCOHOLIC IN HOSPITAL.

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FOR a number of years a considerable amount of discussion has resulted from "the alcoholic problem" and its effect upon society. The increased awareness shown by society towards this problem has led to the notion that the management of alcoholic addiction should be in the hands of the psychiatrist (W.H.O. report, 1951). This, I believe, has been partly responsible for the increase in the number of admissions of alcoholic subjects to the mental hospital, particularly of voluntary patients. Side by side with this increase, estimated in some quarters to be as high as 40% of male subjects admitted to hospital, has come the realization that the older concepts of management are rapidly becoming outmoded and inefficient.

When we speak of the alcoholic we do not, of course, speak of a definite clinical entity, but rather of each case as a case in itself, and of alcoholic dependence as just one aspect of the problem. Nevertheless, there are features that are so common to all cases as to constitute a general problem. Alcoholics who are committed, or who seek voluntary care in a psychiatric hospital, usually have been "through" the hands of many others; they, their relatives and friends have made many attempts to "forget and start anew", but all to no avail. Cynical, hurt and bitter, the patient enters hospital after years of speciousness, evasion and deception, all of which were necessary to make possible his continued drinking.

Alcoholism and the behaviour resulting from this problem frequently bring the subject into conflict with the law, his relatives and his friends. From all quarters he is subjected to punishment in some guise or other, driving him to further excesses of deception, and to a contempt for any figure of authority.

The alcoholic's resentment is further reinforced when he is forced to accept the stigma which unfortunately is associated with the mental hospital. Here he finds himself in contact with the nursing staff, medical staff and various ancillary workers, and he soon learns of the various techniques that may be employed against these people. During individual psychotherapy he brandishes his terrible

past; he leads the therapist back along the path of his lurid past, leading the unwary into "psychologizing". He expresses doubts that the therapist can help him—"after all only an alcoholic can understand my problem". He suggests that his rehabilitation rests with him alone. The therapist may easily accept the role of a salesman attempting to sell his merchandise, and learns much later his error, when his patient becomes dependent and over-demanding, and constantly reports lack of progress. The point is finally reached where "movement" of the case is lost; the therapist finds himself without a solution and is obliged to hide himself behind hastily erected defences. Finally, one must remark upon one simple effect of their excessive demands for the attention of the therapist. This leads to resentment from other psychiatric patients who require attention, and results in a great deal of tension being expressed between the two groups of patients.

Resentment may also be shown by overt or covert evasion of occupational therapy, of assisting in the wards, etc. The nursing staff soon show their resentment, and a further intergroup tension develops. The all too frequent dependency of the alcoholic, as shown by demands for drugs, spectacles, shoes, clothing and money for fares to look for jobs that never seem to turn up, is usually interpreted by the staff as malingering and laziness—a belief that heightens this intergroup tension.

Frequently one meets with frank aggression. Alcoholics give plausible reasons for leaving hospital for the day, only to return in a drunken state in which they may quarrel with the nursing staff, not to speak of the occasional physical attack. Their excuses for the break-out are almost always good, if not ingenious. If the medical officer relieves them of their privileges, they store up their resentment; if he permits it, with mild rebukes, the break-downs become more frequent and the nursing staff more moralistic and punitive. Aggression may also be exhibited in the form of bullying and threatening of other patients. Occasionally, bullying may be used in order to extract money to go upon an alcoholic bout. There are impossible difficulties in reclaiming money on behalf of the patient because the alcoholic usually enters hospital without money.

A further difficulty is that of "institutionalization". In the absence of adequate personal supervision, the patient slips into the easy life of socials, television sessions, dances, films, etc., and one meets a wall of resistance to the idea of rehabilitation and discharge from hospital. The therapist is reminded by the patient that he is really not well enough, and that he is quite sure that he will lapse back into alcoholism. He declines accommodation and jobs offered upon the grounds of unsuitability, and the arguments are presented very skilfully. This phenomenon appears difficult to understand, because it is hard to understand a person preferring life in hospital to his freedom, yet, when we recall the process of desocialization and dependence that has developed during the alcoholic process, the reasons are clear enough.

The alcoholic, then, who is admitted to a mental hospital, creates specific problems for that hospital. Correspondingly, therapy presents heart-breaking difficulties for the staff if therapy is handled upon an individual basis.

It was largely for these reasons that group management of alcoholics was considered for male alcoholics at this hospital. It was furthermore believed that this method had several attractions.

Advantages in Group Management.

The Time Factor.

As mentioned previously, individual psychotherapy is difficult because of the inroads made into one's time. Particularly in the case of alcoholics, the demands are very great, and all too often this results in the treatment being abandoned by the therapist. Group therapy, upon the other hand, possesses the obvious advantage that a number of subjects may be handled at one and the same time. Naturally, the group found it necessary to select a definite time and place, and subsequent experience revealed that this gave them a definable and tangible situation, which lessened the anxious fears that they would be forgotten and neglected. It has been my experience that my individual interviews with other patients are no longer interrupted by queries through the open doorway; rather, such inquiries are left until the group meeting.

The Therapeutic Factor.

No matter what importance we attach to individual aspects of psychopathology and the study of the individual in isolation from his social environment, the subject lives in a social *milieu*, and some attention must be given to the question of how he handles, and how he is handled, by his associates. This, I believe, is difficult to assess from individual psychotherapy, because thought and speech merely shadow reality and may easily be distorted and warped by the inner needs of the subject. In the group situation, provided conditions are favourable, we have a situation closer to reality, in which objective assessment is more possible. Furthermore, because the situation is present in the here and now, the subject is better able to recognize and reorganize the mechanics of his disturbed interpersonal relationships.

It has been claimed by numerous workers that alcoholics, in time, become desocialized, and the explanations why this is so are numerous. Reference is often made to the progressive loss of higher nervous activity and the decreasing cortical function, which result from the toxic factors of alcoholism. In addition, attention is given to the fact that heavy and compulsive drinking and its obvious disturbances of behaviour lead to the rejection of the subject by society. These two views may be incorporated in the formula: alcoholism—rejection—alcoholism—organic deterioration—further alcoholism, etc. One may believe that these problems could well be solved by the subject's admission to Alcoholics Anonymous, with its well-known group characteristics. Unfortunately, it has been my experience that many alcoholics reject any idea of joining this organization. Reasons given are usually related to an inability to discuss their "sins" in an overt and unashamed fashion, and frequently the objection likens the organization to revivalism and emotionalism. How genuine these beliefs may be are difficult to ascertain, but the rejection is a real thing, and obviously an alternate form of group therapy must be provided. One must also admit the possibility of this being an introductory group procedure, which may lead the subject on to Alcoholics Anonymous. For this reason, I believe that in a broad sense the first steps toward resocialization are negotiated in the group situation, in which the alcoholic patient has the opportunity to accept and be accepted by men who are similarly afflicted, and for whom he can develop sympathy. The initial step having been made, it is believed that this can then be generalized, step by step, into reacceptance by outside society. For these reasons it was decided to establish a group of alcoholics at this hospital, meeting once a week for one hour. While the group does function within the range of four to nine persons, it has been found in practice to be at its optimum when seven are present.

Procedure.

Selection has been made of subjects of average to above average intelligence on the basis of a history of addictive drinking. "Symptomatic drinkers" are excluded. While the presence or absence of insight is noted, it has not been used as a basis of selection. In almost all cases selection has been made by the therapist, but in a number of cases suggestions have come from the group, and a final decision has been made by the therapist after full appraisal by the group.

After appraisal and selection, the patient is informed that the group exists and that he is welcome to attend. It is made clear to him that the group consists of alcoholics who meet to discuss the problem of alcoholism and how it affects the subject, and to plan their regime of rehabilitation. They are informed that the group is not a group of Alcoholics Anonymous, although attendance is not

inconsistent with continued A.A. activities. I have believed that it is necessary to offer a reward in order to motivate the group, for motivation is one of the first and most important problems met with during the first stages of organization of the group. I therefore suggest that, by their meeting together and talking over of problems, the medical officers will be able to learn much about alcoholism in order to finalize various principles of treatment and management, which will, of course, help them and all alcoholics after them. Only on one occasion have I met with a refusal to attend.

Whenever possible, members are identified by their first names, the therapist intervening only to provoke discussion. Owing to the sophistication and almost cynicism of the group, I have found it advisable to interpret as indirectly as possible, and, even then, to keep the interpretation as far from "theories" as reason permits.

Findings.

It is, of course, quite impossible to give any detailed account of group meetings, because the material elicited is dynamic and ever changing, and therefore I am forced to describe a few examples of the trends and processes seen during various group sessions.

It has been my experience that spontaneity is a problem, particularly during the early stages of therapy. Such periods of silence must be regarded as a defence against facing the problem, and need to be handled with gentle but firm interpretation. One interesting reaction to this situation is by the individual who is described by Rosenthal, Frank and Nash (1954) as "the self-righteous moralist". Superficially, this man recommends himself for his apparent insight and eagerness. A restless fussy man, he appears to listen to the opinion of others, but adheres to his own noisy and superficial views. He has a long-winded preamble, begs your pardon for his views, promises he "will shut up in a minute", uses impressive words inappropriately, and ends by saying very little. I have met this type of person several times now, and I feel it significant that he says little of importance. We must surely suspect him of making his noise to conceal his anxiety at having to face his problem and its solution. In practice, it has been my experience that the group soon tires of him, and takes over control from him.

As mentioned previously, the degree of insight does not determine inclusion into the group. The alcoholic who makes little of his problem, perhaps to the point of denying the compulsive nature of his drinking, tends to drop out of the group. His reasons are always good: "not well", "other hospital duties", etc. In such cases the group has thought that it was advisable to let them withdraw, but that individual members of the group should continue to contact them. It has been observed that a good deal of tension exists between the persons with insight and those without insight. The second group tend to behave in a patronizing manner towards the former group, and often refer to "alcoholics" in the third person; clashes result, with the "airing of a few home truths". Initially, I was tempted to dispense with the group without insight, but after 11 months of its existence a small number of cases can be demonstrated in which subjects have gained some insight as the result of this process.

I have made it a practice to intervene only when absolutely necessary. Generally, it has been the aim to pose questions in order to stimulate discussion, because any practice contrary to this leads to conformism and sterility within the group.

The following is an example of this principle at work.

A 55-year-old long-term alcoholic, lacking a great deal in insight, led the discussion to the question of the hospital embargo on drinking. I knew that this question was of some importance for him, because he is a tippler from time to time. No doubt his lack of insight is more understandable in view of this knowledge. He made much of the argument that alcoholics are ashamed of their secret drinking and that the resulting anxiety leads to further drinking. He expressed the belief that this anxiety would be controlled if the hospital authorities accepted the practice of placing a jug of wine or ale upon the meal table. Quite obviously, the acceptance of such a procedure would have calamitous results in the mental hospital. I believed that the proposal was offered as provocation; if I took a dominant role and rejected the proposal I would be isolated from the group; if I was permissive then a proposal full of danger would be accepted. I remained silent and appeared to be deep in thought. The idea was repeated, but still I did not respond. The argument was then repeated by another alcoholic with lack of insight. The motion, so to speak, was moved and seconded. When sufficient tension had developed, I then asked the other members of the group what their opinions were. In a very crisp and effective manner they disposed of the proposal.

How to use group discussion in order to obtain a positive proposal may be best illustrated by the following example.

The group had been discussing problems associated with the rehabilitation and resocialization of alcoholics. It had been openly admitted that, while this stood at the end of management, it could be profitably discussed at this early stage. It was noted that several of the members lacked family ties, as the result of death, separation, divorce and rejection, and as a result a situation had arisen which perpetuated their drinking cycle upon their discharge from hospital. They were discharged from hospital with little in the way of money and forced by circumstances into accepting "last line" jobs and inferior accommodation; it was their experience that these contributed to their desocialization or loneliness-drinking pattern. The suggestion was made that this could partially be avoided if the hospital authorities would permit them to seek their own jobs and to use the hospital for accommodation until such time as they had accumulated sufficient money to provide more acceptable accommodation. Obviously this proposal had certain attendant dangers. Rather than discuss them, I asked the group what they thought about the proposal. They readily admitted to dangers, and suggested that provision would need to be made so as adequately to police the privilege. After a great deal of discussion they suggested that the person concerned would need to report to the group from time to time, reporting progress in job placement; that the time of "working from the hospital" be limited to a definite number of weeks; and that extreme measures be used against any member who should use this privilege as a measure to smuggle alcohol into the hospital. These, and a number of like suggestions, were discussed with the hospital authorities and were made the basis for a hospital policy.

Within the hospital, the alcoholic is not free from his desire for alcohol; indeed, so acute may his desire become that we frequently refer to it as an alcoholic emergency. As individuals they do not seem able or willing to help each other; at the best he is avoided, at the worst he is abetted. Several times now the group has voluntarily dealt with this problem with some degree of success.

One member, who had a good record as a cook, approached the group with the suggestion that he should seek employment at a local general hospital, but continue to live at this hospital for a week or two. In spite of a great number of applications for the position, he reached the final two to be chosen. The interviews were drawn out over a number of days and, although tense and anxious, he was quite confident that he would obtain the job. At the next group meeting he was absent. I thought it wise to comment. Discussion was strained, spontaneity was almost nil, but finally, after much stammering, one member blurted out the news that the subject had been unsuccessful in obtaining the position, and that he felt he might soon "break out". Every member then attempted to speak at once, and it was necessary to bring the discussion to order. The problem was tackled in almost a random fashion, but the final view was agreed to that he could best be handled individually by the therapist, but that the group would continue to contact and support him. This was done, I believe with success.

This process was the first, but embryonic, awareness that the group could help each other in an emergency. Their behaviour was at variance with the observation that it is unusual for alcoholics to volunteer the information when one of their fellows is drinking or about to lapse into alcoholism.

A further problem of management is that of discipline. During a number of group meetings, reference had been made to ex-members who had relapsed into alcoholism, and to the ever-present possibility of present members disturbing hospital routine and discipline by drinking.

Initially, a good deal of resentment was expressed because of the fairly vocal and punitive views of the nursing staff. However, as the discussion progressed, the opinion was developed that measures would need to be introduced in order to prevent the mechanical disturbances to hospital routine which resulted from drinking. The view was taken that, whether an active alcoholic is transferred to a closed ward or not, no far-reaching therapeutic effect can be expected; however, from the point of view of hospital efficiency and its ability to carry out its manifold functions, discipline is essential. The group then agreed that an uncontrolled alcoholic should be transferred to a closed ward until such time as he had recovered from his withdrawal symptoms. That such a decision is possible rather indicates that the alcoholic is capable of wisdom in the abstract, but is incapable of such wisdom when he finds himself in the situation. In the one or two cases in which members have subsequently had this decision applied to them, resentment has been notably absent.

The result of group management, expressed as a "cure rate", is obviously impossible. The actual number of members who have passed through the group is small, and with the management of a bare 25 cases one can obtain only the vaguest notion of results in comparison with those obtained from individual management of the alcoholic. However, results are shown in the sense that the alcoholic patient is better able to show therapeutic movement, to develop greater insight, and certainly to be a far happier and more optimistic person, who aids and supports hospital activities rather than hinders them.

Summary.

1. Some attempt is made to define and discuss the limitations met with in the treatment of alcoholism within the hospital setting.

2. A technique of group management is described which has materially assisted in the resolution of a number of intergroup tensions which have previously existed in this hospital.

3. A number of mechanisms employed by patients during group management are identified, and some attempt is made to describe how these may be managed.

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CLINICAL REPORT ON 5000 DELIVERIES IN KOREA.

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THE clinical material encountered in the course of 5007 deliveries at a Women's Hospital in Pusan, Korea, is reported, not because the results are anything of which to be proud, but because the problems in the practice of obstetrics and gynæcology are different from those met with in Australia. The report covers the first five years of the Il Sin Women's Hospital up to September 30, 1957, during which time there were 6700 obstetric admissions.

The hospital is under the auspices of the Australian Presbyterian Mission and caters for all classes of society, though over one-third of the patients require free treatment and less than one-tenth are in the upper income class. It is a training school for nurse midwives, and all normal deliveries are conducted by nurses, but in the case of primigravidæ are supervised by a doctor. The doctors are all young women without previous training in obstetrics. Foreign staff has consisted of one doctor and from one to three nurses. Equipment was minimal at first and conditions primitive, but for the last eighteen months a permanent building and reasonably adequate facilities have made treatment easier.

Table I shows the material covered in this report. The daily average over the whole period was 35·2 in-patients, but latterly was 47 patients. A total of 5007 mothers were delivered of 5139 babies. Of these mothers, 1917 (38·3%) were delivered of their first viable infant.

TABLE I.
Material Covered in Report.

Type of Case.	Admissions to Hospital.	In-Patient Days.	Average Stay in Hospital in Days.
Obstetrical	6700	37,086	5·5
Gynæcological	1352	10,641	8·5
Infants	1097	16,546	15·1

RESULTS.

Infant Results.

Infant results are shown in Table II. Of the 208 stillbirths, in 148 cases the fœtus was already dead when the mother was admitted to hospital. The very high neonatal mortality is largely due to prematurity. Previable infants when born alive are included.

TABLE II.
Infant Results.

Result.	Number of Cases.	Rate per 1000 Births.
Live births	4931	—
Stillbirths	208	40·4 (total births)
Neonatal deaths ..	292	59·2 (live births)
Total loss	500	97·2 (total births)

Maternal Mortality.

There were 77 deaths of pregnant or puerperal patients. This is a gross rate of 15·6 per 1000 live births. As some were admitted to hospital after delivery and as deaths from abortion are here included, whereas cases of abortion are classified as gynæcological, a truer rate is 10·0 per 1000 obstetrical and pregnant gynæcological patients admitted to hospital. Deaths from obstetric causes in patients admitted before delivery were 8·1 per 1000 deliveries (31 deaths).

This extremely high death rate occurred almost entirely in emergency cases. Of the 77 patients who died, 70 were admitted on their first visit to the hospital, six had been seen in the prenatal clinic but refused advice, and one patient who attended the clinic only once died of a probable pulmonary embolus on the fifteenth day after a normal twin delivery. As permission for autopsy was rarely obtained, diagnosis of cause of death is clinical. It will be seen from Table III that toxæmia of pregnancy, often complicated by severe anæmia, was responsible for two-thirds of the obstetric deaths.

It is noteworthy that there were no deaths from sepsis (apart from criminal abortion) in spite of the frequency of unsterile vaginal manipulations before the patients reached hospital.

Medical causes of death were pulmonary tuberculosis, amœbic dysentery and salmonella infections, often in combination. Cardiac disease is listed separately as the pregnancy may have contributed to death.

DETAILED ANALYSIS OF OBSTETRIC CASES.

Abnormalities of Pregnancy.

Multiple Pregnancy.

Multiple pregnancy is common, as usual in countries with a high birth rate, the rate of 2·5% (127 patients delivered) being about twice the general world incidence (Greenhill, 1951).

TABLE III.
Causes of Maternal Death.

Obstetric Causes	Number of Cases.	Non-Obstetric Causes.	Number of Cases.
Toxæmia of pregnancy[1]	36	Medical	11
Hæmorrhage	9	Surgical	3
Ruptured uterus	2	Cardiac disease	3
Embolism (probable)	6	Abortion	7
Total	53		24

[1] Sixteen of these deaths were due to toxæmia alone, in 15 toxæmia was associated with severe anæmia, and five deaths were due to acute yellow atrophy of the liver.

Toxæmia of Pregnancy.

Toxæmia is the major obstetric problem in Korea. It is the chief cause of death (68% of obstetric deaths) and also the cause of much premature delivery, which again results in infant loss. Toxæmia occurred in 22·3% of obstetric admissions to hospital. Mild toxæmia has been diagnosed when the blood pressure was from 140 to 160 millimetres of mercury systolic, or from 90 to 100 millimetres of mercury diastolic, with or without œdema but without albuminuria. Severe toxæmia has been diagnosed when the blood pressure was higher than 160 millimetres of mercury systolic or 100 millimetres of mercury diastolic, or if there was albuminuria.

TABLE IV.
Multiple Pregnancy.

Type of Case.	Number of Mothers.
Twins delivered	122
Triplets delivered	5
Twins aborted	3
Twins discharged undelivered	20
Total	150

While the fundamental cause of toxæmia remains unproven, clinically known facts may help to elucidate the problem. In Korea, three factors appear to contribute to the manifestations of toxæmia: deficiency of protein, deficiency of thiamine, and anæmia. Swelling during pregnancy is so usual that it is considered normal by the Korean woman. After her baby is born, the custom is to eat only rice and seaweed soup, and the rice must be white (highly polished) at that time, even in the poorest family. Deprived of protein after existing on a minimum, and that just when lactation further drains her resources, she swells visibly in the puerperium and comes to hospital with gross œdema. This is a very common experience and most patients recover quickly on a low salt, high protein diet.

The most difficult patients to treat are those who present with the usual signs of toxæmia *plus* a severe anæmia (hæmoglobin value of two to five grammes per 100 millilitres) and a failing heart. Any attempt to give blood, even packed cells, to these patients results in acute pulmonary œdema; while on the other hand they are prone to come into premature labour, when even a small blood loss results in peripheral failure. There have been more deaths in this type of case than in eclampsia. The practice now is to give iron and thiamine intravenously or intramuscularly, frequently also digitalis, and occasionally a protein hydrolysate by submammary infusion. At the time of delivery an attempt is made to replace blood as it is lost with an equal amount by transfusion.

TABLE V.
Toxæmia of Pregnancy.

Type of Toxæmia.	Number of Cases.
Mild	683
Severe	617
Eclampsia	107
Postpartum (usually severe)	81
Acute yellow atrophy (one case doubtful)	6
Total	1494

Eclampsia is so common that it deserves separate analysis. It occurred in 1·6% of all obstetric patients admitted to hospital and in 6·5% of cases of toxæmia.

TABLE Va.
Analysis of 107 Cases of Eclampsia.

Type of Eclampsia.	Percentage of Cases.	Prenatal Care.	Percentage of Cases.
Antepartum	46	None[1]	80·0
Intrapartum	27	One visit	10·5
Postpartum	27	Irregular	9·5

[1] All deaths from eclampsia occurred in this group.

Anæmia in Pregnancy.

Patients with a hæmoglobin value of less than seven grammes per 100 millilitres in the absence of gross hæmorrhage were classified as anæmic. There were 783 cases of anæmia in pregnancy and 135 in the puerperium, involving a total of 13·7% of all obstetric patients admitted to hospital.

TABLE Vb.
Management and Results in Eclampsia (115 Babies).

Mode of Delivery.	Number of Babies.	Results.	Number of Cases.
Spontaneous	81	Live births	90
Forceps	32	Neonatal deaths	17
Cæsarean section	1	Stillbirths	25
Undelivered	1	Maternal deaths	11

Antepartum Hæmorrhage.

Antepartum hæmorrhage occurred in 5% of patients admitted to hospital.

Placenta prævia was diagnosed only when the placenta was felt or seen in the abnormal location. The maternal death was caused by postpartum hæmorrhage in a patient delivered spontaneously at 26 weeks' gestation.

Placental separation caused two maternal deaths: one (with twins) intrapartum, and one in the late puerperium.

Two recent cases in which a diagnosis of fibrinogen deficiency was made recovered after treatment with concentrated plasma.

Abruptio placentae was diagnosed only in the presence of definite evidence of antepartum placental separation. There were 190 other cases of hæmorrhage in pregnancy, usually owing to bleeding from the marginal sinus.

TABLE VIA.
Placenta Prævia—42 Cases (0·8% of Deliveries).

Management.	Number of Cases.	Results.	Number of Cases.
Cæsarean section ..	24	Live births	33
Rupture of membranes	18	Neonatal deaths ..	6
Blood transfusion ..	30	Stillbirths	9
		Maternal death ..	1

Diseases of the Fœtal Membranes.

Hydramnios was recorded in 40 cases.

Hydatidiform mole and chorionepithelioma are relatively common in the Mongolian race. King (1956) in Hong-Kong reports an incidence of hydatidiform mole of 1 in 530 deliveries, and chorionepithelioma of 1 in 3708 deliveries. In this series there were 42 cases of hydatidiform mole, or one case for every 119 deliveries. A practical point in the management of hydatidiform moles is that a "Pitocin" drip running during the evacuation of a mole saves blood.

TABLE VIB.
Abruptio Placentæ—109 Cases (2·1% of Deliveries).

Management.	Number of Cases.	Results.	Number of Cases.
Cæsarean section ..	1	Live births	59
Rupture of membranes	108	Neonatal deaths ..	20
		Stillbirths	50
		Undelivered	2
		Maternal deaths ..	2

Chorionepithelioma occurred 12 times, one case for every 417 deliveries. It followed a hydatidiform mole in seven cases (in one case it was accompanied by a living twenty-weeks fœtus that had exomphalos), abortion in four cases and full-term pregnancy in one case. In three cases the tumour had perforated the uterus causing gross intra-peritoneal hæmorrhage. The pathological diagnosis was found to be unreliable as a help in either diagnosis or prognosis. A patient who was reported as having only a penetrating mole died of pulmonary metastases. An urgent hysterectomy for perforation of the uterus by an invasive tumour was done before the report was received on curette scrapings as "syncytial endometritis".

Other Conditions.

Among patients with pulmonary tuberculosis there were five deaths, and nine deaths occurred among patients with heart disease, though in only three of these was the cardiac disease considered the primary cause of death. The diagnosis of chronic nephritis and hypertension is difficult because most patients are seen too late in pregnancy. The figures are therefore too low.

Abnormalities of Labour.

Premature Labour.

Threatened premature labour after 28 weeks' gestation occurred in 81 patients who were discharged still undelivered.

Premature delivery occurred in 423 cases, 8·4% of deliveries. Prematurity has been assessed on menstrual history and on the subsequent management and condition of the infant, as many full-term babies in Korea weigh less than the standard of 2·5 kilograms (Table XIVA).

The incidence of multiple pregnancy in cases of premature delivery was 8·3% (compared with 2·5% for the whole series), and the incidence of toxæmia was 40% (22·3% for the series).

False labour after 38 weeks' gestation caused the admission to hospital of 281 patients.

TABLE VII.
Medical Conditions Associated with Pregnancy.

Condition.	Number of Cases.
Tuberculosis	103
Syphilis	102
Pyelitis	108
Heart disease	103
Chronic nephritis, hypertension	73

Abnormal Presentations.

No Cæsarean section was done primarily for breech presentation, though it was incidental in several cases in which the operation was performed on account of placenta

TABLE VIIIA.
Breech Delivery (Vaginal)—186 Babies.

Results.	Number of Cases.
Live births	159
Neonatal deaths	34
Stillbirths (12 macerated) ..	27

prævia or previous section. The incidence of breech delivery was 3·6% of babies born. Of these babies, 59 were twins. External version was performed or attempted in 238 cases (including cases of transverse lie).

Of the 37 cases of transverse lie, five were in twin pregnancies. Although Cæsarean section was performed in all cases with a living viable baby, if the cervix was not fully dilated, it will be seen from Table VIIIB that most

TABLE VIIIB.
Shoulder Presentation—37 Cases.

Management.	Number of Cases.	Results.	Number of Cases.
Internal version ..	22	Live births	19
Cæsarean section ..	6	Neonatal deaths ..	6
Destructive	1	Stillbirths[1]	18
Spontaneous delivery	8		

[1] This includes two abortions and three macerated fœtuses.

patients arrived so late that internal version was the method of choice. There were no cases of trauma from version in hospital. In one case the midwife had amputated both the baby's arms before referring the mother to hospital with sharp ends of humerus impacted in the cervix.

Prolapse of the cord occurred with 34 babies, of whom 22 were delivered alive.

Persistent occipito-posterior position of the head, delivered as such or after rotation by the obstetrician, occurred in 107 cases, face presentation in five cases, brow in three cases, and compound presentations in 23 cases.

Disproportion.

Cephalo-pelvic disproportion was diagnosed in 45 cases, usually on clinical grounds, but in a few cases with the help of radiological evidence.

There was one maternal death from a probable pulmonary embolus after Cæsarean section. Rickets is not a problem in Korea, and although many women are of small build, those patients tend to have small babies. But there were several cases of disproportion in elderly multiparæ with large babies after a long birth interval, during which osteomalacia had probably occurred.

Premature Rupture of the Membranes.

Rupture of the membranes before the onset of labour occurred in 256 cases (5·3% of deliveries).

Prolonged Labour and Incoordinate Uterine Action.

Strong contractions known to have been present for over 24 hours or incoordinate uterine action was recorded in 144 cases (2·8% of deliveries).

TABLE IX.
Disproportion.

Management.	Number of Cases.	Live Births.	Neonatal Deaths.	Stillbirths.
Cæsarean section	33	30	3	3
Forceps	11	8	1	3
Destructive ..	1	—	—	1

Postpartum Hæmorrhage.

Blood loss was measured in all cases and was 600 millilitres or more in 411 cases (6·1% of all obstetric admissions to hospital, some of the patients having been delivered before being admitted). There were 13 deaths among patients with postpartum hæmorrhage. Of these, six died primarily from hæmorrhage, though delivered in hospital; all had other complications. One patient who had been delivered at home died from bleeding alone; she was admitted to hospital in a moribund condition.

Trauma.

In 563 cases (11·2% of deliveries) the perineum was lacerated. Of these lacerations, 67 were second and two were third degree tears. The rate is high, but over 200 nurses and doctors delivered their first cases during this time.

In four cases laceration of the cervix was diagnosed.

There were 11 cases of ruptured uterus with two deaths. In only one case did the rupture occur in hospital; this patient was a multipara with a history of difficult deliveries. This case is classified as spontaneous though the rupture was in a scarred lower segment.

TABLE X.
Ruptured Uterus.

Cause of Rupture.	Number of Cases.	Management.	Number of Cases.
"Pituitrin" ..	4	Hysterectomy ..	5
Trauma	3	Repair	4
Spontaneous ..	3	Conservative (incomplete rupture) ..	2
Previous classical section elsewhere..	1		

It is almost routine with local midwives and doctors to give "Pituitrin" intramuscularly to hasten otherwise normal labour. There are three common results of this practice: first, many stillbirths occur, due to loss of placental circulation during tonic contraction, or to cerebral injury from too rapid expulsion through undilated passages; second is incoordinate uterine action, less serious but resulting in a long, painful labour; and third, remarkably rare but most serious, is rupture of the uterus.

Obstetric Management.

Since the middle of 1954 the use of an intravenous transfusion of 10 units of "Pitocin" in a litre of 5% dextrose has replaced medical stimulation (with 2·5 units of "Pituitrin" given intramuscularly every half-hour for four doses) for induction of labour in cases unsuitable for amniotomy.

TABLE XI.
Obstetric Management.

Method.	Number of Cases.	Percentage of All Deliveries.
Medical stimulation	128	2·5
"Pitocin" transfusion	229	4·5
Artificial rupture of membranes ..	351	7·0
Episiotomy	1062	21·2
Forceps delivery	288	5·7
Cæsarean section	95	1·9
Internal version	31	0·6
Destructive operation	8	0·1
Hysterotomy	3	—
Manual removal of placenta	108	2·1

The Cæsarean section rate is low. A conservative policy is necessary in view of the likelihood of the mother receiving "Pituitrin" in her next labour. Cases of ruptured uterus, in which the baby was delivered abdominally, are included in the total from which the rate is calculated.

TABLE XIA.
Cæsarean Section—Indications and Results.

Indication.	Number of Cases.	Results.	Number of Cases.
Disproportion	28	Live births	82
Placenta prævia ..	24	Neonatal deaths ..	11
Previous section or repair of rupture ..	11	Stillbirths	15
Vaginal stenosis ..	7	Maternal deaths ..	2
Ruptured uterus ..	6		
Malpresentation ..	5		
Toxæmia	3		
Others	11		
Total	95	Total births ..	97

Discrepancies in the numbers shown in Table XIA compared with those in Tables VIIIB and IX are due to cases of shoulder presentation and disproportion, in which the immediate indication for operation was previous section or ruptured uterus.

Vaginal stenosis is due to cauterization (see the discussion of prolapse in the section on gynæcological conditions).

TABLE XIB.
Cæsarean Section—Operation and Anæsthetic.

Operation.	Number of Cases.	Anæsthetic.	Number of Cases.
Lower segment ..	84	Local (procaine or "Xylocaine") ..	71
Classical	4	Open ether	19
Hysterectomy ..	4	Local *plus* ether ..	5
Repair of rupture ..	2		
Removal of uterine horn	1		

Blood transfusion was given to 1024 obstetrical and gynæcological patients (12·7% of admissions to hospital). Blood was difficult to obtain and there was no regular stock on hand during the first two years. Since then cost has been the limiting factor (£7 for 400 millilitres), though one patient had 28 units.

Puerperal Morbidity.

By the international standard, there were 504 cases of puerperal morbidity (7·5% of all obstetric patients admitted to hospital). Of these, in 255 cases the cause of morbidity was either sepsis or unknown, in 163 cases it was urinary infection, and in the rest it was breast infection or medical disease. In spite of the high morbidity there were no deaths from sepsis. There were only three cases of phlebitis or thrombosis and those were of superficial veins only. Early ambulation is taken for granted, and many women walk from the delivery room to the ward.

Results of Prenatal Care.

Prenatal clinics are run every day, but it is difficult to convince the public of the value of prenatal care. Only about one-third of patients seen are eventually delivered in hospital, and of the patients delivered only 60% were seen before their admission to hospital.

It is obvious from Figure I that almost all the patients who suffered from the five lethal conditions largely preventible by prenatal care were from among those who were admitted as "emergencies". But these were only 40% of

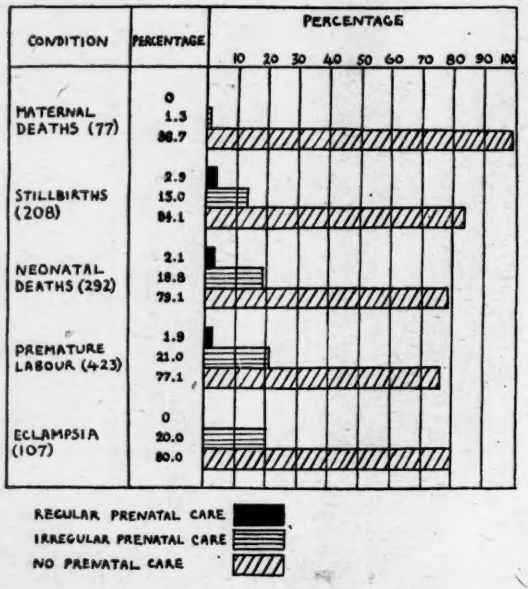

FIGURE I.

The effects of prenatal care as shown in each of five conditions by the percentage of patients who had regular, irregular or no prenatal care.

the total number of patients delivered. If the rates for these five conditions are arranged separately for the 3000 who had even limited care, and for the 2000 who had none, the figures for the first group are comparable with world standards (Table XII).

FŒTAL AND NEONATAL CONDITIONS.

In view of the few autopsies obtained, diagnosis is clinical and incomplete in many cases. Detailed figures will not therefore be reported.

Prematurity.

Premature babies born numbered 460. Of these, 58 were stillborn, 24 of them macerated. There were 228 neonatal deaths, of whom about one-quarter were previable (less than 28 weeks' development but born alive). This death rate is extremely high and death seems to be most frequently due to infection. But twice as many premature babies lived when the mother had had even irregular prenatal care as survived when the mother was admitted to hospital as an "emergency".

TABLE XII.

Results of Prenatal Care.

Condition.	Rate *per Centum* in 3000 Patients from Prenatal Clinic.	Rate *per Centum* in 2000 Emergency Admissions to Hospital.
Maternal death ..	0·03	3·8
Stillbirth	1·1	8·8
Neonatal death	2·0	11·0
Premature labour ..	3·2	16·3
Eclampsia	0·7	4·7

Congenital Abnormalities.

Congenital abnormalities that could be diagnosed clinically are listed in Table XIII.

Erythroblastosis.

Erythroblastosis was diagnosed five times, but in no case was it due to Rh incompatibility. The Mongolian race is Rh-positive except where mixed marriages have occurred.

TABLE XIII.

Congenital Abnormalities.

Type of Abnormality.	Number of Cases.
Gross central nervous system	11
Cleft lip and palate	18
Bone and joint[1]	10
Digestive system	7
Genito-urinary	5
Others (mostly minor)	21

[1] There were no cases of severe talipes.

Average Weight and Length of Mature Korean Babies at Birth.

Babies diagnosed and treated as premature were excluded, otherwise the series is of consecutive deliveries.

TABLE XIV.

Average Weights and Lengths of Korean Babies at Birth.[1]

Sex.	Weight in Kilograms.		Length in Centimetres.	
	Average.	Range.	Average.	Range.
Male ..	3·18	2·08 to 4·88	50·0	43·2 to 60·5
Female	3·12	1·94 to 4·60	49·1	40·6 to 58·4

[1] Based on the weights of 1231 babies and the lengths of 1195 babies.

There were 882 infants admitted to hospital during this period. Of these, 262 were suffering from malnutrition, 196 from diarrhœa, and 123 were infants abandoned at the hospital. Normal infants were admitted in 332 cases because of either the mother's illness or breast feeding problems.

GYNÆCOLOGICAL CONDITIONS.

Of the 1352 gynæcological patients (Table I), 105 were not actually admitted to hospital. They had dilatation and curettage performed as out-patients and have been included to make more complete the figures for abortion and diagnostic curettage.

Deaths.

There were five adult deaths not classified as maternal. Three were gynæcological, in one case from chorion-epithelioma and in two from malignant ovarian tumour.

Two were from medical disease, cerebral hæmorrhage and rheumatic heart disease.

Ectopic Pregnancy.

Ectopic pregnancy is extremely common, 228 cases having occurred during this period, or one for every 22 deliveries. At the Royal Women's Hospital, Melbourne, 500 cases are reported for the years 1950 to 1956, while there were more than six times as many deliveries per year as in this series (Wood and Martyn, 1957). Ectopic pregnancy must be suspected in any case of lower abdominal pain or abnormal bleeding. There were three cases of abdominal pregnancy, in one of which a living baby was obtained who died in a few hours. Though many patients were in severe shock there were no deaths due to ectopic pregnancy.

Abortion.

Abortion was the reason for admission to hospital of 661 patients (49% of gynæcological cases).

TABLE XV.
Abortion.

Type.	Number of Cases.	Cause.	Number of Cases.	Deaths.	Number of Cases.
Complete ..	151	Spontaneous	463	Criminal ..	7
Incomplete	365	Criminal ..	44	Hysterotomy (uræmia) ..	1
Threatened	145	Induced for medical reason ..	9	Tuberculosis or dysentery	3
Total ..	661	Total ..	516	Total ..	11

Tumours.

Radical operation for carcinoma of the cervix has not been undertaken and radium is unobtainable. Therefore, although carcinoma of the cervix is very common, there were few cases among the patients admitted to hospital (Table XVI).

TABLE XVI.
Tumours.

Malignant.		Benign.	
Site of Tumour.	Number of Cases.	Type of Tumour.	Number of Cases.
Chorionepithelioma ..	12	Fibromyoma of uterus	57
Ovary, tube or broad ligament	26	Other uterine tumours including polypi ..	37
Uterine body	1	Ovarian	99
Uterine cervix	5	Other genitalia, including broad ligament cysts	24
Other malignant disease	6		
Total	50	Total	217

However, carcinoma of the uterine body is truly rare in Korea. Only one case has been found in spite of frequent diagnostic curettage. Although carcinoma of the breast is not strictly speaking the province of the gynæcologist, one would expect patients with this condition to come to a women's hospital. In fact, many breast conditions are seen in the out-patient department, but carcinoma has rarely been found. Another rare condition is endometriosis (Table XVII). It seems likely that the rarity of these three conditions, endometriosis, carcinoma of the uterine body and carcinoma of the breast, is related to the fact that the breast and uterus are allowed to fulfil their normal function more consistently in Korea than in the West.

Some of the ovarian tumours classified as benign in Table XVI were probably malignant, as microscopic examination was performed only in some instances.

Other Gynæcological Conditions.

Fistulæ are relatively common in Korea, but none have been seen after hysterectomy or the use of radium. Of the 27 cases, 18 were due to obstetric injury, eight to cauterization of the vagina for prolapse, and one to self-surgery for prolapse. The last-mentioned patient had amputated the offending cervix and cystocele with her kitchen knife.

TABLE XVII.
Other Gynæcological Conditions.

Condition.	Number of Cases.
Salpingo-oophoritis	127
Disorders of menstruation	91
Utero-vaginal prolapse	51
Fistulæ (one recto-vaginal, 26 urinary) ..	27
Parametritis and pelvic abscess	21
Diseases of the vulva and vagina ..	15
Appendicitis	11
Endometriosis	2

Utero-vaginal prolapse is very common, as would be expected with the high birth rate and the fact that most deliveries are not attended by a skilled accoucheur. But it is difficult to persuade these patients to submit to operation. Much more faith is placed in the traditional treatment administered by village "grannies", namely, cauterization of the vagina with caustic soda. With good fortune, after the burns have healed, vaginal adhesions produce a result similar to the Le Fort operation. But there are three common serious sequelæ of this practice, apart from the pain and distress soon after treatment. Cauterization caused eight of the 26 cases of urinary fistula. Vaginal stenosis obstructed labour in 10 patients, one of whom also had a fistula, and seven of whom required Cæsarean section (Table XIA). Vaginal stenosis of greater degree leading to hæmatocolpos, hæmatometra, pyocolpos and pyometra was found in 13 patients (including one with fistula also). Thus, during this period there were 31 cases of major complications as a result of the treatment of prolapse by cauterization; during the same period only 27 patients could be persuaded to submit to primary operation for this condition.

Sterility, though a recorded complaint in only 75 in-patients, is a major problem in Korea. Over 3200 Rubin's insufflations were performed during this period, but results cannot usefully be analysed for lack of follow-up investigations. The majority are cases of secondary sterility after septic abortion, difficult delivery or gonorrhœa. As babies are plentiful in Korea, concern over sterility may seem surprising. But it is of supreme importance in the East for a woman to have a son. If she fails in this, her husband is likely to leave her or take a second wife.

CONCLUSION.

It should be realized that the foregoing account is a summary of the statistics of one hospital in a country where over 95% of deliveries are conducted in the home, frequently unattended. Patients with obstetrical abnormalities would be expected to reach hospital rather than those undergoing normal labour. However, because of ignorance or distrust of Western medicine, many patients with obstetrical disorders die at home without considering hospital care, while many patients in normal labour come to hospital either because they have no home or because they have learned the benefits of modern medicine.

The results obtained are very poor by comparison with Australian standards. But when it is realized that this great loss of life has occurred in the emergency cases it can be seen that there is hope for great improvement with education in the advantages of prenatal care.

SUMMARY.

The clinical material, obstetrical, gynæcological and pædiatric, encountered during the delivery of 5007 mothers over a five-year period in Korea is presented.

The stillbirth rate was 40·4 per 1000 total births and the neonatal death rate 59·2 per 1000 live births. The gross maternal mortality was 15·6 per 1000 live births.

The advantages of prenatal care are startlingly demonstrated by a comparison of maternal mortality, stillbirths, neonatal deaths, premature labour and eclampsia in patients with and without prenatal care.

TABLE XVIII.
Operations.

Operation.	Number of Cases.
Dilatation and curettage	486
On tubes and broad ligament	273
On ovaries	109
On uterus	92
On vulva, vagina and cervix	57
For prolapse	27
Laparotomy	29
Others	98
Total	1171

Toxæmia of pregnancy accounted for 22·3% of obstetric admissions to hospital and 68% of obstetric deaths. Contributing factors appeared to be protein and thiamine deficiency and anæmia. Eclampsia occurred once for every 66 obstetric patients admitted to hospital.

Hydatidiform mole and chorionepithelioma were frequently seen, in the ratios of one case of hydatidiform mole for every 119 deliveries, and one case of chorionepithelioma for every 417 deliveries.

The dangerous practice by the local midwives of hastening labour with intramuscular injections of "Pituitrin" is discussed. Common results are stillbirth, incoordinate uterine action and rupture of the uterus.

Prematurity, a consequence of toxæmia in most cases, occurred in 8·4% of deliveries and was the major factor in 78% of all neonatal deaths (228 deaths).

The average length and weight of Korean babies at birth are calculated.

The rarity of endometriosis, carcinoma of the body of the uterus and carcinoma of the breast is discussed.

Serious sequelæ of the traditional treatment of prolapse by cauterization of the vagina are reported.

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Reports of Cases.

EXTRADURAL HÆMORRHAGE IN A YOUNG CHILD.

By W. D. WALKER, M.B., B.S.,
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EXTRADURAL HÆMORRHAGE, though not common in adults, is less common in children. Munro and Maltby (1940) reported the lesion in 44 out of 1200 head injuries in persons in all age groups. This is an incidence of approximately 3%, and in only one case was the patient a child under 10 years of age. In a series by Campbell and Cohen (1951) of children under 12 years of age, the lesion was present in 20 out of 1136 patients with head injury admitted to their hospital, an incidence of 1·8%. The following case, though fairly typical, has one or two unusual features making it worthy of report.

Clinical Record.

At 3.30 p.m. on July 3, 1957, the patient, a boy aged 16 months, fell from a landing onto a concrete path four feet below. He cried immediately and his nose bled five minutes later. He became pale and drowsy, and an hour later he vomited and again his nose bled for a short time. He was brought to hospital and examined three hours after injury and was found to be pale, drowsy and irritable when disturbed. He had a large hæmatoma over the left parietal region. There was a suggestion of flaccidity in the right arm and leg, but reflexes were equal on each side and no other abnormal signs in the central nervous system were evident. The pulse rate was 88 per minute. An X-ray picture of the skull showed a fine, vertical, linear fracture of the left parietal bone running down to the squamous suture and very near the course of the middle meningeal artery. The patient's condition was recorded on a head observation chart every quarter of an hour; his pulse remained steady (ranging from 100 to 110 per minute), and six hours later only hourly readings were taken.

The next morning the patient's condition was unchanged. He remained drowsy and irritable when disturbed, but ate well. He was again noted to have minimal flaccidity of the right arm and leg, otherwise his central nervous system was normal. His pulse rate had remained steady at 110 per minute. The next morning his condition clinically was the same as the day before, and he ate a good breakfast. Between 10 a.m. and noon his pulse fell steadily from 110 to 90 per minute, and his left pupil began to dilate and was not reacting normally to light. These observations were noted, though medical attention was not obtained until 2 p.m., when the child had a convulsion. The convulsion was of the Jacksonian type, with movements involving the left face, arm and leg. The left pupil was now widely dilated and not reacting to light, and the right pupil was half dilated and reacting sluggishly to light. The breathing was stertorous. All four limbs were in a state of spasticity, and there was voluntary movement of the left arm and leg, but none of the right arm and leg. All reflexes were grossly exaggerated. The lower limbs were held in plantar flexion, and clonus was well marked in both.

At 2.30 p.m., 47 hours after injury, two left parietal burr holes were made, one on either side of the fracture. Local anæsthesia *plus* "Cyclonal" given intravenously were used. One of these holes was widened with the bone nibblers, and a large extradural hæmatoma over one inch in depth was evacuated. Bleeding from a posterior branch of the middle meningeal artery was controlled with diathermy. He was given a transfusion of 200 millilitres of blood during and after the operation. Immediately after the operation the right pupil had returned to its normal size, and the left pupil was only half dilated. Four hours after the operation the patient responded to his name, had lost much of his spasticity and was able to move all four limbs. The next day he was drowsy, though able to follow a light with his eyes. His limbs had become flaccid and there was more tone on the right side.

Two days after the operation he cried in the normal manner when his parents left after visiting. His post-operative course was covered for 10 days, at first with penicillin and streptomycin and later with chloramphenicol. Apart from a small subgaleal hæmatoma (10 millilitres), requiring one aspiration, his post-operative course was satisfactory. On July 17 he left hospital, two weeks after the injury. On discharge he was a happy child of normal temperament, but his left pupil was still about half dilated and reacted sluggishly to light. He had some slight spasticity and weakness in the right arm and leg. He could stand alone but not walk, though he was walking well prior to the injury. He could make fine movements

with both hands. Three months later he still had a slight dimunition in the light reaction of the left pupil, and slight weakness in the right leg, but he was running and playing normally and using his right hand when feeding himself. Incidentally, the patient was found to have a grade IV systolic murmur and thrill at the left sternal edge, and a provisional diagnosis of ventricular septal defect has been made.

Discussion.

In the case reported, there was no apparent initial loss of consciousness, and the downhill trend with development of definite localizing signs began 44 hours after injury. The progress of the disease thereafter was rapid. If there has been no initial loss of consciousness and no deterioration after 24 hours, one tends to believe that all will remain well. This case demonstrates that vigilance must be maintained in all cases of head injury. In ten of the 20 cases of Campbell and Cohen's series, the patients were under two years of age, and it is notable that in all but one of these there was no initial loss of consciousness. The downhill trend leading to operation in this group generally occurred within the first 24 hours, and the progression of symptoms was often rapid. In the case here presented, the deterioration in the patient's condition occurred somewhat later than usual. The full recovery obtained is to be expected in patients in this younger age group.

Gurdjian and Webster (1942) state that extradural hæmorrhage is less common in children than in adults, because in the child's skull the vascular channels are not so deep and so the vessels are less liable to injury. Also, in children the dura mater is more adherent and so more hæmostatic.

Acknowledgements.

I wish to thank Mr. J. S. Lekias, who was in charge of this case, for his permission to report it.

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Reviews.

The Door of Serenity: A Study in the Therapeutic Use of Symbolic Painting. By Ainslie Meares, M.B., B.S., B.Agr.Sc., D.P.M.; 1958. London: Faber and Faber. 8½" × 5", pp. 120, with 24 illustrations. Price: 21s. (English).

IN this book Dr. Ainslie Meares has written a potential classic. In simple terms he weaves the story of a psychiatrist's efforts to make contact with a single schizophrenic patient over the years. The way was not easy. He had to contend with personal difficulties as a therapist dealing with a young woman for whom self-executed drawings were the only method of approach. Her illustrations were detailed and colourful. It was necessary to treat them as an original language expressing the fears, the hopes, the hates and the anxieties of a very complex personality. As the pages reveal the slow progress to sound health and a useful community life, one can rejoice with the author over difficulties overcome and the new happiness which had been achieved.

The book is divided into 24 sections, each of which is headed by a coloured plate, a facsimile of the patient's drawing; beneath is the interpretation. The accompanying text outlines the content of the interview. Dr. Meares recorded the conversations in full, a feat made possible through the patient's slow verbal responses. She sought to express herself by symbolic painting and not through speech. The first effort in painting was "bizarre, weird, horrible. There is a general air of gloom about it. There are heads, and hands, and legs. Other parts of the body are less clearly shown. It seems to be a mass of dismembered bodies. Yet, at the same time, the parts seem to belong, the one to the other. They are bodies distorted out of all earthly shape. This is how she feels. She is disorganized. The parts of her body lack unity. It is an expression of her feeling of muddle and disintegration. She is hardly human". The third plate represents Jennifer (our patient) as in a cage. She is red because she is sexual. Her body is hollow. Her head is not properly fixed. She is mad!

The drawings show a progressive improvement. Chaos is replaced by order. Four figures become clearer. They symbolize her real parents and her foster parents. Jennifer appears as a bird in flight. The latter has a third wing. At the twenty-third session, it is left behind as she enters the blue door to serenity. In the final scene the bird is free. The meaning of the symbolism is at last clear. "Poor Jennifer has gone through life thinking that she should have a sex organ like her foster-brother. She has believed all the years that she was only a deformed boy. Hence she was no good; a thing to be ridiculed, to be scorned and outcast." The third wing was the phallic organ which is now discarded—she is free to be a normal person.

No review can do justice to the painstaking elucidation of the symptomatology and personality deviations in this case history over the years. The author makes no pretence of omnipotence. He is a humble recorder of facts, freely admits his mistakes, and is careful to point out that the chief difficulties arise from the fact that symbolism is peculiar to the individual. Each person speaks an individual sign language, for which there is no universal approach.

This saga of Jennifer highlights the need for patience in therapy and the necessity to find a personal key to unlock individual secrets. Not every case is approachable through painting. In searching to unlock the door to serenity, Dr. Meares encourages us to search for "a" key blank and then work on it, until at last the bolt is drawn and the patient is free.

In conclusion, the illustrations are excellent and the text is clear. This is a book which not merely the psychiatrist, but also any medical practitioner, who is interested in the mechanisms underlying symptoms and behaviour, can enjoy.

Spontaneous and Habitual Abortion. By Carl T. Javert, M.D.; 1957. New York, Toronto and London: The Blakiston Division, McGraw-Hill Book Company, Incorporated. 9" × 6", pp. 464, with 196 illustrations. Price: $11.00.

WHEN C. T. Javert comments in the preface to the first edition of his book on spontaneous and habitual abortion that patients suffering from this condition are often "the forgotten women in a maternity hospital", his gentle taunt contains a germ of truth. No significant contribution to this subject, at least in the form of a monograph or a textbook, has appeared in the English language for twenty years, the last being that written by Taussig in 1938. Javert's book is a combination of an excellently documented scientific treatise, and an entertaining dissertation on the psychological and sociological background to the problem of spontaneous miscarriage.

Over a period of seven years (1947-1954) 2000 consecutive abortion specimens were obtained from 2545 patients with a clinical diagnosis of spontaneous abortion. The material from 471 therapeutic and unintentional abortions was also studied and served as a control. Every specimen was submitted to both gross and microscopic examination, and certain useful and illuminating facts emerged. The so-called "blighted ovum" was found in only 35% of specimens examined, compared with the currently-quoted figure of 50%. Evidence of apparently spontaneous decidual hæmorrhage was present in 61% of the cases from which material was available, and the author, later in the book, develops with considerable skill the thesis that in many instances this is the result of excessive uterine activity due to psycho-neuro-endocrine factors induced by emotional tension, especially when such tension occurs in pregnant women who have already demonstrated some degree of autonomic instability.

Cord complications were encountered more commonly than is generally recognized and included stricture, atresia and excessive torsion. Defective vascularization of the chorionic villi was also found to be a significantly recurring factor on histological examination. Generally speaking this section of the book gives an authoritative account, not previously available, of the pathological factors leading to spontaneous abortion in their probable order of frequency.

Clinical aspects of the miscarriage problem are carefully evaluated, and popular ideas are subjected to critical examination. Thus the role of external trauma is put in its right (and limited) perspective; the value of prolonged bed rest as a prophylactic measure in patients subject to habitual abortion is questioned, and diagnostic pitfalls such as metropathia hæmorrhagica are emphasized.

Treatment as advocated by the author is chiefly directed towards the prevention of recurrent abortion, and places emphasis on the need for supportive psychotherapy and sympathetic handling of these patients. Because his findings indicated a high incidence of spontaneous decidual hæmorrhage, and because his results have appeared to justify it, Javert uses vitamin C and vitamin K together with calcium as specific therapy to protect the endothelium of the decidual vessels.

Javert is obviously an enthusiast—not, however, in regard to a particular method of treatment, but in his obvious desire to discover the basic causes of spontaneous abortion. The book is eminently readable and not without a leavening of humour, to which the semi-humorous illustrations by Miss Ann Ogden contribute not a little. In addition there are many photographs, photomicrographs and line drawings of outstanding quality.

Basic Cardiology. By T. E. Gumpert, M.B., Ch.B., F.R.C.P.; 1958. Bristol: John Wright and Sons, Limited. 8½" × 5½", pp. 176, with 72 illustrations. Price: 25s. (English).

THIS is not a text-book of cardiology, but a collection of lectures delivered by the author to his students and to undergraduates. It is intended to bridge the gap between the detailed text-book on cardiology and the inadequate treatment of the subject found in general medical text-books.

The first part includes classification of heart disease, clinical examination, and a brief account of various instrumental diagnostic aids. In a small book like this due balance between different conditions cannot be maintained, whereas each individual lecture *per se* is well proportioned. The author deals with function and failure, which the student must understand before he can deal with the various types of lesions and diseases. These he considers in the succeeding chapters. The book is well illustrated with diagrams, electrocardiograms and X-ray pictures, which are well selected. In such a book it is easy to point out omissions and sometimes lack of proportion, but here, on the whole, the author is easy to follow. He gives the general principles and a broad outline which is less confusing for the undergraduate than a lot of details of the many exceptions which may be found in any cardiac syndrome.

Bald statements and generalizations can be misleading at times. Most cardiologists would strongly disagree with the author's twice-stated assertion that the majority of patients with an auricular septal defect also have mitral stenosis. The book is written by a physician with a special interest in cardiology; so if it is not always quite in line with the latest theory on some special point, it compensates for this by generally taking a broad view of the cardiac state with due regard for the other conditions with which it may be associated.

This book is easily read and contains a great deal of information in a form assimilable by those who are nearly or newly qualified.

The Story of Heart Disease. The FitzPatrick Lectures for 1956 and 1957, given before the Royal College of Physicians of London by Terence East, M.A., D.M. (Oxon.); 1957. London: William Dawson and Sons, Limited. 8½" × 5½", pp. 148, with 11 illustrations. Price: 30s. (English).

A WELL-KNOWN writer and lecturer on the subject of cardiology, Dr. Terence East, senior physician to the cardiological department of King's College Hospital, London, was appointed by the Royal College of Physicians to deliver the FitzPatrick Lectures for 1956 and 1957. The rich material laboriously unearthed from original sources in preparation for these two lectures has been brought together in a small book which all cardiologists will appreciate as an interesting and accurate survey of significant early discoveries in this rapidly developing field of modern research. Although Dr. East modestly disclaims any pretentions to proficiency or unusual experience as a medical historian, he is evidently an enthusiastic bibliophile with a private library of ancient and rare editions published by the first real contributors to our knowledge of this subject, and he possesses the necessary scholarly endowments for this kind of research by virtue of a mastery of several languages. In a short preface, Dr. East wisely observes that a sense of history must be innate in the mind of a clinician, "for he must be constantly tracing the course of events in his patients", and this prompted him to apply the same mental process to a study of the development of knowledge in cardiology. With the help of his own translations into English from the original texts of foreign writers, careful planning in the presentation of his material, and then setting it out in a fluent and palatable literary style, he seems to have applied his cardinal principle with conspicuous success. The subject matter is divided into four main sections: "Diagnosis"; "Lessons of the Deadhouse", a chapter further subdivided under the headings of congenital defects, pericardial disease, valvular lesions, aneurysms and syphilitic lesions, myocardial disease, rheumatic carditis; a lengthy discussion on the "Coronary Circulation and its Disorders"; lastly, "Failure of the Circulation and its Treatment".

It is to be regretted that in an historical treatise of such intrinsic merit there is too much evidence of hurried proof-reading. For instance, the name of the eighteenth century anatomist, William Cowper, is twice given as Cooper; Lucius Annaeus Seneca, the Roman patrician of Nero's reign, is quoted as writing a letter in 64 B.C.; we find that "inspection and palpitation were the only means of examining the heart"; and there are several minor typographical errors in the spelling of words.

Throughout the text there are a number of interesting plates illustrating the history of cardiology by the reproduction of title-pages of books published over the last three centuries, with clear portraits of the physicians who wrote them; these leave nothing to be desired.

Books Received.

[The mention of a book in this column does not imply that no review will appear in a subsequent issue.]

"Hermaphroditism, Genital Anomalies and Related Endocrine Disorders", by Howard W. Jones, jnr., M.D., and William Wallace Scott, M.D., Ph.D.; 1958. Baltimore: The Williams and Wilkins Company. 10¼" × 7¼", pp. 482, with 466 illustrations. Price: £8 16s.

The authors are, respectively, Associate Professor of Gynecology and Professor of Urology at the Johns Hopkins University School of Medicine.

"Milestones in Modern Surgery", by Alfred Hurwitz, M.D., and George A. Degenshein, M.D.; 1958. New York: Hoeber-Harper Book. 9¼" × 6", pp. 244, with many illustrations. Price: $15.00.

Thirty articles of major significance in the development of modern surgery are reprinted with annotations and biographical sketches.

"The Principles and Practice of Medicine: A Textbook for Students and Doctors", by Sir Stanley Davidson, B.A., M.D., F.R.C.P., F.R.C.P. (Lond.), M.D.; 1958. Fourth Edition. Edinburgh and London: E. and S. Livingstone, Limited. 8½" × 5½", pp. 1078. Price: 35s. (abroad).

It is only two years since the previous edition appeared, but the book has been fully revised.

"The Interference Microscope in Biological Research", by Arthur J. Hale, M.D., Ch.B., Ph.D.; 1958. Edinburgh and London: E. and S. Livingstone, Limited. 8½" × 5", pp. 128, with many illustrations. Price: 20s.

The purpose of this book is to outline the background of the technique of using the interference microscope.

"The Lost Days of My Life", by Jane Simpson; 1958. London: George Allen and Unwin, Limited. 8½" × 5", pp. 169. Price: 15s. (English).

This is stated to be the true story of a girl who was unjustifiably confined to a mental hospital.

"The Surgeon's Tale: A Story of Modern Surgery", by Robert G. Richardson; 1958. London: George Allen and Unwin, Limited. 8½" × 5", pp. 256, with seven illustrations. Price: 25s. (English).

The story of surgery since the introduction of anæsthesia and antisepsis, told for the general reader.

"The Problem of Dental Caries and the Fluoridation of Public Water Supplies", by Douw G. Steyn, B.Sc., Dr.Med.Vet.; 1958. Johannesburg: Die Vootrekerpers, Beperk. 8" × 5½", pp. 208, with five photographs. Price: 45s.

The author is Professor of Pharmacology in the Medical Faculty of the University of Pretoria.

The Medical Journal of Australia

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THE PRESENTATION OF A MEDICAL PAPER.

RECENTLY the question of literary style and the writing of a medical paper was discussed in these columns. Brief reference was also made to the presentation of the paper. However, it may enlighten the inexperienced and refresh the minds of the experienced if we say something more of the presentation of a paper intended for publication in this Journal and of its subsequent career.

All papers should be typed with at least double spacing between lines, reasonable space at the top and bottom of each sheet and a wide margin. Even the best paper will require some subeditorial marking, and there must be room for this. For reasons that are not clear, many authors, who dutifully have their papers typed with double spacing, think that this is unnecessary for their references and present these in single spacing; this is as wrong as it could be, because references often need subediting even when the rest of the paper is impeccable. The exact size of the sheets of paper used does not matter, provided they are not too small; quarto and foolscap are the preferred sizes. The original typed sheets should be submitted to the Journal and a carbon copy kept by the author; it is tempting the Fates to expect an editor to look kindly on a carbon copy, especially if it is smudged and faint, but hopeful authors still do it. No words should be underlined in headings or elsewhere, as that will be done where necessary during the subediting. Underlining normally indicates that italic type is to be used, and this will be determined, in part at least, by the Journal's own typographical style. It is generally accepted that, especially in scientific papers, underlining of words for the purpose of emphasis is a sign of weakness in the paper; it is a trick reminiscent of female letter writers of the nineteenth century, and can be avoided with care in phrasing. Similarly, underlining (or italic type) to highlight key words in a passage, making each into a kind of heading in the body of the text, is usually frowned on in scientific papers; it is more satisfactory, if more formal, to use suitable cross headings or side headings. Abbreviations, especially those which are obscure or unorthodox, should be avoided.

In THE MEDICAL JOURNAL OF AUSTRALIA, references to articles quoted from journals take the following form: author's name (surname first), year of publication, full title of article, abbreviated title of journal, volume number, page number; for example, Ones, B. (1988), "The Blood Groups of Moon Men", *J. Lunar Med.*, 3: 57. The abbreviations for journals at present in use in the Journal are those of the "Quarterly Cumulative Index Medicus", but from the beginning of 1959 we shall be using those listed in "World Medical Periodicals"; these are in general use in British journals and conform to the usage now widely adopted by scientific periodicals in general. If reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full details in each instance. References to books take the following form: Sawyer, B., and Allen, B. (1867), "Eccentricities of Genius", Sawbones Press, London: 51. Finally, we adjure authors, by Apollo and Æsculapius and Health and All-Heal and all the gods and goddesses, to check their references, for an incorrect reference is worse than useless.

Tables warrant care in preparation. It is usually a mistake to try to squeeze too much information, and especially too many different kinds of information, into one table. A table should have a brief explanatory title, so that the table is intelligible on its own without reference to the text; but detailed explanations, if they are necessary, should be included in footnotes rather than in the title. Would-be statisticians with limited knowledge will save a lot of trouble by seeking experienced advice. In particular, we wince at the expression as percentages of figures from a total well under one hundred, especially when they are used for purposes of comparison with much larger series, and we are not impressed by two and more decimal places in figures that obviously cannot or need not have a high degree of accuracy.

In the matter of illustrations, inexperienced authors should never hesitate to seek editorial advice. Good illustrations can greatly enhance a paper, but they should be included only if they are necessary and technically good. Positive prints are requested instead of X-ray films and photographic negatives or transparencies. Graphs, diagrams and sketches should be drawn in indian ink on firm white paper or cardboard. The originals of these are preferred to photographic copies. Coloured illustrations can be considered only rarely as the cost of printing them is very high.

When a paper is submitted to the Journal for consideration for publication, immediate formal acknowledgement of its receipt is made. After a variable period the author is advised that his paper has been accepted or rejected, or that it may be accepted with certain modifications. When a paper is accepted, the author is asked to assign the copyright of the article to the Australasian Medical Publishing Company Limited; this is for the protection of the author and of the Journal, allowing the Company to act appropriately in the interests of both if necessary. However, in practice, it is not allowed to prejudice the author's freedom to use his material as he thinks fit. If an article is finally rejected, the manuscript is returned to the author; this, it may be noted, is a departure from a former policy of the Journal of long standing.

Accepted articles are then prepared for publication and allotted to a particular issue of the Journal. The delay at this stage will naturally depend upon the amount of material on hand. Many papers lose none of their value from a reasonable lapse of time; but where delay may prejudice claims for priority in original work or reduce the practical value of a topical article, we do our best to be cooperative. A few weeks before the anticipated date of publication, a proof is sent to the author in galley form for final perusal and prompt return. This is not the time to rewrite the article, and only essential amendments can be accepted at this stage. It is helpful if corrections are made according to the usual proof-reading convention, a simple guide to which will be sent to any author who

requests it, but the important requirement is that any desired corrections should be made quite clear; a covering letter may be desirable. This is the stage at which orders should be made for reprints, and on the proof is stamped a simple order form for this purpose. The minimum number of reprints that can be supplied is 25, and normally a charge is made for them. However, research workers and others who need reprints but find it difficult to pay for them are invited to put their case before the Editor; the Directors of the Publishing Company have a sympathetic policy in such circumstances. The delay between date of publication and delivery of reprints has been unfortunately long for some time past, but this is being overcome. The author of an original article is sent two free copies of the Journal in which his article appears, and the author of a report of a case is sent one free copy; further copies may usually be bought if required.

This then, without too much wearisome detail, is the story of a paper submitted to the Journal. We hope that it will help the prospective author to send his brain children out into the world in a fit state to do him credit.

Current Comment.

MERCHANT SEAMEN AND THE TREATMENT OF VENEREAL DISEASE.

THE Brussels Agreement of 1924 is the international instrument under which provision is made in major ports for the free treatment of venereal infections in seafarers. Australia became a party to this Agreement in 1928.

In December, 1956, public health authorities from five maritime countries, together with members of the secretariats of the International Labour Office and the World Health Organization, met to consider the provisions of the Agreement from the point of view of the health administrator of today. In their report,[1] much of the early history of maritime venereal disease control is described for the first time, the original text of the Brussels Agreement and details of its implementation are given in full, and a bibliography on the health of seafarers is appended.

It has been said that "the seaman does not as a rule contract venereal disease at sea, but on land, and in a port which is not his home". This comment at once brings out the particularly international character of the threat presented by these diseases, which until comparatively recently constituted a considerable risk for a large group of workers in many countries, with far-reaching consequences for both the public health and the economy. Thirty-five years ago the incidence of venereal diseases was very high; certain governments and international bodies had already contributed much towards providing special treatment facilities for infected seamen, but the decisive step towards international control was taken simultaneously by the International Labour Organization and the *Office International d'Hygiène Publique*, in drafting legislation aimed at making treatment freely available to seafarers on the widest possible scale. In 1921 the Belgian Government took the initiative of proposing the adherence of seafaring nations to a draft Agreement drawn up by the OIHP, which was subsequently signed at Brussels by 13 countries in 1924. The Belgian Ministry of Foreign Affairs became the depository for this international instrument, receiving ratifications and accessions as further countries decided to associate themselves with the convention. Some 29 sovereign states and 38 territories now adhere to it.

From time to time the Agreement has been reviewed by the OIHP, the Health Organization of the League of Nations and WHO, and recommendations have been made on its implementation—as, for example, the listing of treatment facilities throughout the world in the "International Directory", the application of the Agreement to the great international river systems, the revision of the Personal Card carried by seamen, and proposals regarding serodiagnosis and therapy. Since the second World War a general improvement in social conditions and the simplification of treatment resulting from the development of antibiotics have very greatly mitigated the seriousness of maritime venereal disease. Thus it seemed again desirable to reconsider the provisions of legislation which had been drawn up under such different circumstances. As early as 1948, one of the first preoccupations of WHO was how the Agreement might be brought up to date technically, and whether it should ultimately be replaced by international health regulations for venereal disease control. As a basis for these deliberations, WHO arranged a number of studies (some in cooperation with the International Union against the Venereal Diseases and Treponematoses) to gather information on the nature, extent and control of venereal infections in ports, at one of which (Rotterdam) a demonstration project was set up with the collaboration of the Netherlands Government. In 1956 the Netherlands National Committee for the Revision of the Brussels Agreement reported that it considered the convention to be "an excellent example of the value of international co-operation in the field of health"; this finding was endorsed by the WHO Study Group which met at the end of that year to make a detailed examination of the Articles of the Agreement. While recognizing certain shortcomings previously indicated both by the Netherlands Government committee and by the first World Health Assembly in 1948, the Group concluded that it would be inadvisable to attempt to replace the Agreement by another type of international instrument, but that the technical aspects of its provisions should be periodically reviewed by a WHO expert committee and that recommendations on minimum standards of practice under these provisions might be made available to interested governments. It further proposed that the possibility should be explored of establishing a broader international approach to the health problems of seafarers, covering prevention, treatment and rehabilitation in all fields of health. This would call for much preliminary study of present conditions and facilities, as well as a careful evaluation of the requirements of such an international maritime health service, which might eventually be expected to absorb the provisions of the Brussels Agreement.

[1] "The Agreement of Brussels, 1924, Respecting Facilities to be Given to Merchant Seamen for the Treatment of Venereal Diseases", World Health Organization Technical Report Series No. 150; 1958. Geneva: World Health Organization. 9¼" × 6¼", pp. 64, with illustrations. Price: 3s. 6d.

THE MECCA PILGRIMAGE.

THE Mecca pilgrimage came into existence over thirteen centuries ago. Since then it has provided not only an important religious goal for the devout Moslem, but also a major international public health problem. However, after sixty-five years of international sanitary control, the pilgrimage has now been freed from special health measures. As from January 1, 1957, the Mecca pilgrims have been subject only to the same health regulations as other international travellers. This followed on the action of the ninth World Health Assembly in May, 1956, when everything specifically dealing with the international sanitary control of the pilgrimage was deleted from the international sanitary regulations and annexes. An interesting and reassuring sequel is the fact that the following telegram was sent by Dr. M. G. Candau, Director-General of the World Health Organization, to H. E. Rachad Pharaon, Minister of Health of Saudi Arabia, at the close of the 1958 Mecca pilgrimage on June 30 of this year: "Happy to hear that you succeeded in keeping present pilgrimage free of quarantinable disease in spite of recent epidemic situation in Asia."

An interesting account of the Mecca pilgrimage and of the public health aspects of its history has been prepared

by W. Omar, of the W.H.O. Regional Office for the Eastern Mediterranean.[1] He traces it back to A.D. 632, the year 10 of the Hegira (the Mahommedan era reckoned from the year of Mohammed's flight from Mecca to Medina), when Mohammed performed his "farewell pilgrimage". Since then the Islamic faith has demanded that Moslems should perform the Haj or Great Pilgrimage to Mecca at least once in their lives, provided they have the necessary means. This must take place at a particular time in the year, and year by year since then great numbers of Moslems from every part of the world have converged on Mecca. Most are from the middle and poorer classes, some walk all the way, some devote their whole lives to making the pilgrimage. Omar states that the destitution of many pilgrims has led a number of governments to take measures to prevent the departure of any pilgrim from his own country unless his return ticket is paid for. In the early years most pilgrims came by caravan from Asia and Africa across the Arabian deserts. Now great numbers come by sea and by air. As the culmination to the pilgrimage the vast number of pilgrims moves out of the little town of Mecca to Mount Arafat, a bleak open hill about twelve miles east of Mecca, then on a further four miles to Mozdalifa, next on to Mena, and finally back to Mecca. During the ceremonies thousands of animals are sacrificed, and every pilgrim must drink the holy water of the Zam-Zam well—a shallow, open well from which water is drawn by buckets; many pilgrims take home tins of the water for their friends and relations.

In the past the physical rigours of the pilgrimage, especially on the homeward journey, brought about the deaths of many pilgrims, and the overcrowding and primitive sanitation facilities coupled with severe climatic conditions made the pilgrimage an ideal breeding ground of infection. This was many times aggravated by the fact that the majority of Mecca pilgrims come from countries where such diseases as cholera, plague and smallpox are endemic. Their coming together and subsequent dispersal meant that the threat of these diseases was not only to themselves, but also to a large part of the world. Malaria, dysentery and other water-borne epidemic diseases have also been common among returning pilgrims. The worst enemy of the pilgrimage has been cholera, and its spread through the pilgrimage first led to international agreements, putting the pilgrimage under special sanitary control. One notable cholera pandemic spread by the pilgrimage originated in India in 1863. The disease broke out in Mecca two years later during the Jubilee Pilgrimage of 1865, and subsequently appeared in Egypt and in all the Mediterranean ports, whence it reached by means of immigrants the Senegal and North America, Brazil and Paraguay. In 1902, cholera broke out suddenly in a small village in upper Egypt, spread rapidly all over the country and caused 42,000 deaths. According to some reports this originated from Zam-Zam water poured by a Mecca pilgrim into the well of his home village. From Egypt the epidemic spread to Syria, Palestine and Iraq, and later to Persia, Russia, Poland and Western Europe.

From the middle of the nineteenth century a number of individual countries began to apply a degree of sanitary control on pilgrims, but it was not until 1892 that the first International Sanitary Convention was signed and ratified, and the sanitary control of the Mecca pilgrimage became the subject of an international agreement. Various quarantine and other health measures were introduced, and from time to time these measures were amplified and consolidated. The next major development was the International Sanitary Convention of 1926, Part 3 of which is devoted to special provisions regarding the pilgrimage and to specific regulations setting forth the sanitary control measures for all ships carrying pilgrims; it covers in detail the measures to be taken before the embarkation of the pilgrims, sanitary and medical facilities aboard the pilgrims' ships, and quarantine regulations for outward and homeward voyages by various sea routes as well as for caravans and trains. This was supplemented by other international agreements, including one of 1929 between the Arab countries of the Middle East, in which vaccination against smallpox and anti-cholera inoculation were made compulsory for all pilgrims before they left their countries for the Hedjaz. It was also agreed to issue a special pilgrimage passport and to make compulsory the use of specified itineraries by the pilgrims. The matter was further considered by the World Health Organization soon after it came into existence, and new international sanitary regulations came into force in October, 1952. These carried on many of the previous provisions relating to the pilgrimage, but special provisions were added to cover travel by air, and also the control of yellow fever.

Omar states that general adherence to these regulations on the part of the responsible authorities has undoubtedly made a considerable contribution to the rapid improvement in standards of health control since the end of the second World War. In 1956 the Government of Saudi Arabia invited a group of WHO experts on quarantine matters to visit the country and to inquire into the provisions made for the health of the pilgrims during the pilgrimage season. Subsequently the group reported that the quarantine arrangements for the pilgrims at Jeddah were adequate and satisfactory from every point of view. At Mecca and Medina the development of health facilities had been fairly rapid, although some minor points required further attention. The quarantine station at Jeddah, which was opened in April, 1956, is described as a well-planned, modern institution, with up-to-date hospital, laboratory, pharmacy, refrigeration apparatus, laundry, water supply and bathrooms. The ninth World Health Assembly considered the report of the group of experts, and noted that the health administration for Saudi Arabia was now fully equipped to deal with all sanitary problems connected with the pilgrimage within its territory. The result was the deletion of the relevant provisions of the International Sanitary Regulations. Thus concluded, for the time at least, and it may be hoped permanently, a major episode in the control of disease on an international level.

[1] *Chron. World Health Organ.*, 1957, 11: 337 (November).

SKIN EXCHANGES BETWEEN PARENTS AND THEIR CHILDREN.

SOME interesting aspects of the behaviour of skin homografts have been brought out by L. A. Peer, W. Bernhard and J. C. Walker,[1] who give an account of their own experimental work in exchanging full thickness postauricular skin grafts between parents and children. They found that homografts of skin survived for a long period of time only when transferred between mothers and boy or girl infants. These long-surviving homografts were observed in the group of infants who had received whole blood injections from their mother and also in those of the uninjected series. Tolerance was not associated with a low gamma-globulin level or with any definite pattern of blood grouping. No long-surviving skin homografts occurred when skin was exchanged between fathers and boy or girl infants, regardless of whether or not the infant had received an injection of its father's blood. It seems evident that the mother of a severely burned child should be used as the skin donor whenever this is possible, instead of the father, other members of the family or friends. The long survival time of some skin grafts from mother to child suggests the possible clinical value of blood transfusions from mother to child rather than from fathers or unrelated donors. The longer survival of some skin homografts exchanged between mother and child, as compared to those exchanged between father and child, suggests that tolerance between mother and child may occur because of an intermingling of fœtal and maternal circulations during the pregnancies of these mothers. As sex chromatin study of homografted skin cells is a positive method for determining the survival of skin grafts when the transplantation is between male and female, this may also be useful to establish the survival or replacement of cells in cornea and cartilage homografts.

[1] *Am. J. Surg.*, February, 1958.

Abstracts from Medical Literature.

SURGERY.

Malignant Melanoma of the Feet and Hands.

R. J. BOOHER AND G. T. PACK (*Surgery*, December, 1957) analysed all the malignant melanomata of the hands and feet seen at the Memorial Cancer Center of New York between 1935 and 1950 inclusive. In this sixteen-year period they found that 16·5% of all malignant melanomata were on the hands and feet, there being 29 on the hands and 122 on the feet, melanoma being in their experience the most common malignant tumour of the feet. The authors proceed to make a detailed analysis of the cases in which these lesions occurred on the feet or hands, and their findings include the following statistics. The five-year survival rate without recurrence for all malignant melanomata of the feet was 25%; for hands the same figure was 40%. Of the patients with a lesion of the foot, 25% had been aware of a preceding mole at the site where the malignant lesion developed. Forty-six patients underwent radical groin dissection for proved metastases, and of these 11% were alive and well after 10 years. The authors also quote extensively from other reviews of the subject and give a substantial bibliography.

The Pathogenesis of Acute Pancreatitis.

D. W. ELLIOTT, R. D. WILLIAMS AND R. M. ZOLLINGER (*Ann. Surg.*, October, 1957) present a series of experimental observations on dogs, from which they conclude that alteration in the pancreatic resistance to bile is an important factor in the pathogenesis of acute pancreatitis. The mechanism they suggest consists of three successive events: (i) the entry of pancreatic secretion into the biliary tree; (ii) the incubation of pancreatic secretions with stagnant bile; (iii) the infiltration of the pancreas at low pressure by this incubated mixture, to which it has little resistance. The resulting pancreatitis may range in severity from mild œdema to fulminating hæmorrhagic necrosis.

Massive Venous Occlusion.

W. S. EDWARDS (*Surgery*, January, 1958) presents some observations on the pathogenesis and management of massive venous occlusion. To gain information as to the cause of the disappearance of peripheral pulses and resultant necrosis of the leg, the author has determined saphenous venous pressure before and for many hours after sympathetic block by spinal anæsthesia and thrombectomy. He considers that there is a venous spasm of the limb which, added to the massive degree of mechanical obstruction by iliofemoral thrombosis, causes total outflow occlusion. Arterial inflow is thereby prevented and tissue necrosis may result. Sequestration of large volumes of fluid in the œdematous leg precipitates shock. He successfully treated three patients with massive venous occlusion by sympathetic block by spinal anæsthesia, followed by heparin administration. One patient was treated successfully with spinal anæsthesia followed by thrombectomy of the iliac and femoral veins. One patient was treated with leg elevation and rapid passive flexion and extension. However, an early acute pulmonary embolus occurred shortly after this therapy, showing the danger of manipulating an extremity with fresh loosely attached venous clot. He considers that a satisfactory plan of therapy for massive venous occlusion is sympathetic block by spinal anæsthesia, high leg elevation, a constant intravenous heparin transfusion and thrombectomy if the venous pressure does not drop or symptoms do not rapidly improve with the first three measures. However, he states that none of these measures guarantees freedom from pulmonary embolus, which still remains a serious problem.

Ligation of the Inferior Vena Cava for Thrombo-Embolism.

W. A. DALE (*Surgery*, January, 1958) discusses the clinical management of 16 cases of inferior vena cava ligation for thrombo-embolism. There was no operative mortality and no further embolism after the operation. They noted early post-operative œdema of the leg as a common sequel to the operation, but late leg complications proved to be minor if the legs were carefully managed. Three of nine patients followed for more than 10 months after operation had some œdema and ulceration of the leg, but no patient was incapacitated. The author advocates anticoagulant drug therapy in general for venous thrombosis or pulmonary embolism. Inferior vena caval ligation (rather than superficial femoral vein ligation) should be reserved for cases of failure of anticoagulant therapy, contraindication to anticoagulants, and thrombosis of pelvic veins. Rare indications include septic pelvic phlebitis and phlegmasia cœrulea dolens.

Discharge from the Nipple.

H. E. MADALIN, O. T. CLAGETT AND J. R. MCDONALD (*Ann. Surg.*, November, 1957) point out that patients complaining of abnormal discharge from the nipple may be subdivided into two groups: those with an associated mass and those without a mass. In the former group the method of investigation and treatment is clear, namely biopsy of the mass with further treatment determined by the findings. The latter group presents difficulties mainly because of the diversity of opinion as to the probability of a cancer being present. The authors therefore undertook a detailed study of 100 breasts which had been removed by simple mastectomy on account of discharge from the nipple without a palpable mass. As a result of careful histological study they found only one carcinoma present in these 100 specimens, and that was from a patient with a proved carcinoma of the other breast. A search of the records of the Mayo Clinic showed that the incidence of carcinoma of the breast associated with discharge but without a palpable mass was very low, averaging less than one case per year, and in each case the discharge was bloody. The authors concluded that treatment for discharge from the nipple in the absence of a mass should be conservative, that is local excision of the offending duct if it can be localized. Otherwise the patient should be followed carefully if the discharge is bloody, since in rare instances carcinoma may be present in the breast.

Treatment of Thrombo-Embolism with Aqueous Heparin.

H. W. HARROWER, A. HURWITZ AND R. YESNER (*Surg., Gynec. & Obst.*, March, 1958) gave concentrated aqueous heparin subcutaneously to a group of patients with thrombo-embolism. The effects of heparin administration were followed with clotting time determinations and blood viscosity profiles. In 44 out of 47 patients who received subcutaneous heparin the results of treatment were satisfactory. Thrombophlebitis recurred or pulmonary emboli occurred during or after treatment in three patients. A twelve-hour interval between heparin injections was generally preferred. Body weight was a helpful but not reliable guide to heparin dosage. Because of variations in heparin requirements among different patients and in the same patient from time to time, frequent clotting time determinations were necessary for the control of therapy. Repeated subcutaneous injections of heparin were well tolerated and could be continued in patients after discharge from hospital. With subcutaneous heparin administration, hæmorrhagic complications seemed to be more frequent than with intermittent intravenous therapy. The concomitant administration of subcutaneous heparin and oral dicoumarol was found to be contraindicated. In normal subjects and in patients with thrombo-embolism, the changes in blood viscosity profiles after subcutaneous heparin administration were similar to those produced by intravenous administration but were more prolonged. The degree and duration of alteration of viscosity profiles tended to, but frequently did not, parallel changes in clotting times. Pre-treatment blood viscosity profiles were abnormal in about half the cases of thrombo-embolism. It is concluded that in acute thrombo-embolic conditions, after recent surgery, and in patients who present more than the usual risk of hæmorrhage, heparin treatment should consist of intermittent intravenous injections. Subcutaneous heparin administration may be substituted after heparin requirements have been stabilized provided that the clinical course of the patient is satisfactory.

Treatment of Thermal Injuries.

R. P. HAMMEL, J. A. RIVERS AND C. P. ARTZ (*Ann. Surg.*, November, 1957) have compared the relative merits of various antibiotics applied locally to granulating wounds caused by thermal injury, in preparation for skin grafting. All wounds were treated before the sixtieth day after the burn had been sustained. The compounds used were: (i) petroleum jelly alone; (ii) 1% "Furacin" in petroleum jelly; (iii) 1% chloromycetin in petroleum jelly; (iv) 10 milligrammes of tetracycline hydrochloride and 50 milligrammes of neomycin sulphate per gramme in petroleum jelly; (v) 30

milligrammes of oxytetracycline and 10,000 units of polymyxin B per gramme in petroleum jelly; (vi) 400 units of bacitracin, five milligrammes of neomycin sulphate and 5000 units of polymyxin B per gramme in petroleum jelly. They found no evidence from the percentage of graft take, the appearance of the granulation tissue or the bacterial counts that one agent was any more effective than another or that any agent was superior to petroleum jelly alone. From this study they consider that antibiotic compounds when applied locally are of no more value than frequent cleansing and changes of dressing in the preparation of a recipient site for skin grafting after thermal injury, if the treatment is otherwise satisfactory.

Plunging Ranulas.

G. CRILE, JUNIOR (*Surgery*, November, 1957) reports two cases of ranulas extending into the neck and recurring after multiple excisions of the mucus-filled cysts. Cure was finally effected by removing the sublingual salivary gland from which the mucus originated.

Ligation of the Thoracic Duct.

J. J. GARAMELLA (*Arch. Surg.*, January, 1958) reports the case of a patient with chylothorax complicating closure of an interventricular septal defect, which was successfully treated by ligation of the thoracic duct. In order to show up the duct during the operation, 25 milligrammes of Evans-Blue dye were injected subcutaneously into the thigh 40 minutes prior to the dissection, and this demonstrated very well the thoracic duct between the azygos vein and the aorta. The author also reports the results of some thoracic ductograms performed on 35 cadavers, demonstrating variants of the anatomy of the lymphatic system.

Skin Grafting Technique in Third Degree Burns.

W. B. MACOMBER, M. K. H. WANG AND A. VERSACI (*Plast. & Reconstruct. Surg.*, April, 1958) state that the end results of local treatment of any third degree burn depends heavily on the success of skin grafting. When the burned area is limited, the depth of the burn well defined, and the general condition of the patient good, immediate excision of the dead skin followed by the application of split-thickness skin will produce the ideal result. However, when the burn is extensive and the patient's condition poor, this technique is not practicable. Skin grafting must then be postponed until the dead tissue has completely separated and the granulation tissue is well developed, healthy and clean. Over the past ten years, the authors have followed an avulsion technique in dealing with granulation tissue immediately before skin grafting. As a primary dressing, after cleansing, a pressure dressing is applied, being preferred to the "open" method of treatment. The first dressing is usually changed between the tenth and the fourteenth day after the initial injury. At that time the demarcation between the superficial and deep burns is usually obvious. After complete removal of dead tissue from the wound by either surgical debridement or piecemeal removal, saline dressings are repeated every four hours until the wound is ready for skin grafting. The optimal time usually occurs between two and three weeks after the first dressing. The authors avulse the clean granulating tissue with the handle of a scalpel, and if this is done in the correct plane of cleavage, bleeding is minimal. No sharp instruments should be used in this procedure. Big sheets of moderately thick, well perforated, split skin grafts are then applied to the denuded area. The grafts are well stretched and secured to the border of the wound by means of continuous plain catgut sutures. The wound is dressed, immobilized and elevated for a minimum of seven days. The authors consider that the use of chemicals or enzymes to hasten the separation of burn eschar is painful, adding further irritation to the wound, and is far too expensive to be practical for large burns. If homografts are used, they are applied directly over the granulation tissue without avulsion. Both homografts and granulation tissue are then avulsed at the end of four to six weeks, when autografts are applied. The skin grafts are cut by dermatome with a thickness of 0·0012 to 0·0014 inch. The authors do not use systemically-administered antibiotics as a routine in the process of skin grafting, but do use local application of sulphadiazine or sulphathiazole powder over the graft. Aerosporin solution directly over the grafts appears to cut down the incidence of pyocyaneus infection.

Indications for Common Duct Exploration.

M. K. BARTLETT AND W. R. WADDELL (*New England J. Med.*, January 23, 1958) review the indications for and results of common bile duct exploration at the Massachusetts General Hospital during the period 1943 to 1954 for primary operations on the biliary tract. The indications for and the performance of choledochostomy increased the mortality of cholecystectomy from 0·6% to 1·8% in a total of 2243 cases. When there was a positive history of jaundice duct stones were found in only 57% of 382 cases, but when there was no history of jaundice, common duct stones were still found in 34% of 518 cases. If the common bile duct was dilated, choledochotomy revealed stones in 55% of 354 cases, but when small gall-stones occupied the gall-bladder, stones in the common duct were revealed in only 19% of 316 cases.

Post-Gastrectomy Hæmorrhage.

R. B. PHILLIPS AND W. A. CHILDS (*Am. J. Surg.*, March, 1958) present six cases of post-gastrectomy hæmorrhage and briefly review the literature. These cases all occurred in a series of 123 patients treated by gastrectomy, and represented the second most frequent complication. Two patients bled post-operatively from gastro-duodenal arteries at the base of posterior penetrating ulcers which had been left in place at the time of gastrectomy. Two bled from anastomotic suture lines. A fifth bled from a punctate ulcer high on the upper wall of the stomach, which was overlooked at the time of the original surgery. In the sixth patient the cause of hæmorrhage was never determined. Three of the patients died. These cases illustrate the necessity for some definitive treatment of the bleeding point during gastrectomy for bleeding duodenal ulcer, although actual resection of the ulcer is not considered necessary. The authors consider that the open method of anastomosis lends itself most readily to good hæmostasis. Though a duodenal ulcer is present, some other lesion may actually be a source of hæmorrhage, and if blood is not actually seen issuing from the crater a thorough search should be made for additional sources of bleeding. Treatment of post-gastrectomy hæmorrhage is along the same lines as any upper gastro-intestinal hæmorrhage. The authors recommend that if intragastric clots make it difficult to keep the stomach empty, a large gastric tube should be used to allow lavage, otherwise distension of the stomach may stretch the suture line and cause further bleeding.

Ulcerative Colitis.

W. S. CARPENTER AND P. J. CONNOLLY (*Arch. Surg.*, January, 1958) discuss the surgical management of chronic ulcerative colitis in 33 cases of this condition. They consider that in the fulminating case the procedure of choice is colectomy to the low sigmoid with ileostomy. In elective cases with diffuse disease, the authors perform a one-stage proctocolectomy. In segmental disease they perform a less extensive procedure. They state that in their series the mortality and morbidity were low. Ileostomy dysfunction was their main problem, especially with regard to stenosis, even though they used the modern methods of ileostomy. They state that the post-colectomy patients are able to carry on normal physical and social activities.

Subtotal Gastric Resection for Benign Peptic Ulcer.

N. HASTINGS *et alii* (*Arch. Surg.* January, 1958) discuss results obtained by subtotal gastric resection in the treatment of 353 cases of benign peptic ulcer which were followed up for a time varying from one to seven years after operation. Of the patients with duodenal ulcer 68% had a satisfactory result (excellent or good), 23% had an unsatisfactory result (fair or poor), and 9% developed recurrent ulceration. In cases of benign gastric ulcer results were satisfactory in 78%, unsatisfactory in 21%, and 1% had recurrent ulceration. Malnutrition was a frequent cause of an unsatisfactory clinical result, 55% of patients with an unsatisfactory result showing excessive weight loss. Dietetic study indicated that the weight loss was due to a markedly diminished daily caloric intake. The difference in marginal ulcer rate accounted almost entirely for the better results obtained in gastric ulcer patients. While the recurrence rate of 9% in the duodenal ulcer group seems high, several reports by other investigators cite similar results. The authors conclude that the marginal rate after the usual subtotal gastrectomy for duodenal ulcer is higher than has generally been recognized.

Medical Practice.

REPORT TO THE PRIME MINISTER BY THE NATIONAL RADIATION ADVISORY COMMITTEE, JULY, 1958.[1]

1. Introduction.

1. In May, 1957, the Commonwealth Government appointed the National Radiation Advisory Committee to advise it, directly through the Prime Minister, on any matter concerning the effects of ionizing radiation on the Australian community whether arising from medical, industrial, scientific, international or other causes. Advice may be given either on the request of the Prime Minister or when the Committee feels that advice should be offered.

2. The membership of the Committee comprises: Professor Sir Macfarlane Burnet, O.M., F.R.S. (Chairman), Director, Walter and Eliza Hall Institute of Medical Research; Professor S. Sunderland (Deputy Chairman), Professor of Anatomy, University of Melbourne; Professor Sir Leslie Martin, C.B.E., F.R.S., Professor of Physics, University of Melbourne; Professor J. P. Baxter, O.B.E., Chairman, Australian Atomic Energy Commission; Professor E. W. Titterton, C.M.G., Professor of Nuclear Physics, Australian National University; Mr. D. A. Gill, Chief, Division of Animal Health and Production, C.S.I.R.O.; Dr. W. P. Holman, Medical Director of Cancer Institute Board of Victoria; Mr. D. J. Stevens, Director, Commonwealth X-Ray and Radium Laboratory; Mr. J. R. Moroney (Secretary), Department of Supply. Mr. E. L. Cook, Assistant Secretary, Research and Development Branch, Department of Supply, also attended all meetings at the invitation of the chairman.

3. The Committee first met on June 10, 1957, and after nearly one year's existence, feels that the time is opportune to present in an interim report its assessment of some radiation problems considered to be currently of major importance to the welfare of the Australian community. The Committee has met on seven occasions.

4. There already exists in Australia a number of agencies set up by the Commonwealth and State Governments either separately or jointly, which are empowered to examine and report on various aspects of the medical and industrial use of ionizing radiation, and fall-out from weapon tests. The National Radiation Advisory Committee has the responsibility of informing the Government at the national level on the over-all problem and recommending measures considered necessary for the welfare of the Australian community.

2. Summary of Current Knowledge of the Biological Effects of Ionizing Radiation.

5. The exact mode of action of ionizing radiation on living matter is not clearly understood. Contributions to knowledge of the effects of ionizing radiation have been made by: (*a*) Their use, to man's advantage, in the medical treatment of abnormal tissues. Under these circumstances radiation doses are high, being of the order of 3000 to 80,000 times the annual dose received by man as a result of his exposure to natural background radiation. (*b*) A study of radiation accidents and of those occupationally exposed to radiation over long periods. For the latter group, the International Commission on Radiological Protection in its current recommendations defines as a "Permissible Dose" a level of radiation which, on an annual basis, is 150 times that of man's exposure to natural background radiation. (*c*) Experiments on sub-human forms of life, particularly mammals.

6. The degree of effect depends, among other things, on: (*a*) The tissue or organ under consideration. (*b*) The radiation dose to that particular tissue or organ. (*c*) The rate at which the dose is delivered. The effect is different for some tissues, if the same total dose is received as a single exposure in a short time (high dose rate), a single exposure over a long time (low dose rate), or as various fractions of the total dose over an extended period.

7. Knowledge is particularly incomplete about the effects of low doses and low dose rates. Most animal experiments have, of necessity, been carried out with doses (and dose rates) higher than those to which man, even in this era of expanding use of ionizing radiation, is likely to be exposed. Because of this and of his long life and the long interval between conception and the end of the reproductive period as compared with experimental animals, the application of results from animal experiments to man is subject to uncertainties.

8. In any evaluation of the hazards of radiation, it is necessary to know quantitatively the relation between the magnitude of the biological effect and the radiation dose. Two possible relations are: (*a*) The effect may be in direct proportion to the dose. Under these circumstances any dose, however small, will have some effect. (*b*) A "threshold" dose may exist when no effect will occur unless a certain minimum dose is exceeded. Any attempt to apply either of these hypotheses is complicated by man's inevitable exposure to natural background, by the recovery that certain tissues make after irradiation and by the biological effects of certain physical and chemical agents in our environment which do not emit ionizing radiation. The most pessimistic evaluation is made when it is assumed that the effect is in direct proportion to the dose.

9. It is widely accepted that the genetic effects of radiation may be directly proportional to the dose to the gonads. However, in evaluating the genetic effects on future generations, it should be appreciated that the radiation dose which is of significance is not that to the individual, but that averaged over the population genetically at risk—the group exposed in the period from conception to the end of the period of reproduction.

10. That the effect is directly proportional to radiation dose to the bone marrow in the case of leukæmia has been proposed by some experts as a working hypothesis for a further study of the problem. However, an analysis of statistical data of a group which has made a major contribution in this field does not exclude the possibility of a "threshold" dose. The existence of such a threshold would considerably reduce the leukæmia hazard of ionizing radiation.

3. Sources of Ionizing Radiation.

Man is exposed to various sources of ionizing radiation, and these are discussed in summary below.

(a) Natural Background.

11. This generation, as have been previous generations, is exposed to radiation from natural sources. Radiation received arises from cosmic rays and the naturally occurring radioactive materials in the environment such as the soil, the masonry of buildings, etc. Naturally occurring radioactive materials enter the body by inhalation and by ingestion through food and water. In both cases, irradiation of tissue occurs. Because of man's long exposure to an environment contaminated with naturally occurring radioactive elements, a state of equilibrium has been reached when the body content is fairly constant.

12. Through the various components of the natural background, the gonads of the population and such tissues of interest as bone marrow and bone cells are irradiated to a dose which varies only to a small degree with location and living habits.

13. If a direct dose-effect relationship is assumed, then man has inherited from previous generations a certain burden of genetic mutations from natural background exposure and each succeeding generation makes a contribution to the future burden. In addition, if a similar dose-effect relationship is assumed for the induction of leukæmia, a certain number of cases of this disease are attributable to natural background. It is recognized that there are other agents which do not give rise to ionizing radiations, which could affect both the genetic integrity and the leukæmia incidence in man.

14. For the purpose of comparison, it is relevant to note that the gonads and bone marrow of man are exposed to annual radiation doses of the order of 100 millirem.

(b) Medical Exposure.

15. In technologically developed countries, X rays and the radiations from radioactive materials have been applied to man's advantage in medical diagnosis and treatment. It is difficult to envisage modern medical practice without their help. Any evaluation of the biological effects consequent to their use must be made in the light of the contribution that these sources of ionizing radiation have made and will make in the future to our health and well-being. This evaluation is made all the more significant since, in technologically developed countries, medical uses of ionizing radiation make by far the major contribution, additional to natural background, to the radiation dose to the individual and the population genetically at risk.

[1] This report is published in full by courtesy of the National Radiation Advisory Committee.

16. Including all sources of radiation used in modern medical practice, the average annual dose to the population genetically at risk is of the order of that of the natural background. That is, the annual dose to the gonads of about 100 millirem from natural background is increased to about 200 millirem by the medical use of X rays in diagnosis and treatment.

17. The average annual bone marrow dose which may be of significance in relation to the incidence of leukæmia is also increased to about 200 millirem.

(c) Occupational Exposure.

18. The International Commission on Radiological Protection in its most recently published recommendations quotes a permissible dose which on an annual basis could result, for the occupationally exposed individual, in a dose of 15,000 millirem. Although attempts have been made in several countries to determine whether, in the long term, this dose (or those higher doses which were received by earlier workers in radiation) has any significant effect, statistical evaluations have given conflicting results.

19. Owing to the small number in this category, their present annual contribution to the average dose to the whole population genetically at risk is of the order of only one to two millirem. With the future expansion in the use of atomic energy in all its phases, a greater contribution is possible.

20. The National Radiation Advisory Committee notes that certain States have used the Model Act and Regulations prepared by the Industrial Hygiene Committee of the National Health and Medical Research Council to bring many of the sources of ionizing radiation under legislative control and recommends similar action in the other States as soon as possible.

(d) Environmental Contamination.

21. Man's environment has present in it radioactive materials other than those which occur naturally. These have originated from atomic and thermo-nuclear explosions and from the disposal and release of radioactive materials from atomic energy establishments. Amongst the more potentially hazardous are the longer lived radio-isotopes strontium 90 and cesium 137.

22. Up to the present, radioactive materials disposed of or released from atomic energy establishments have not contaminated the world environment to a detectable level. In certain limited areas detectable levels of contamination have arisen. Appropriate authorities have taken action to reduce the hazards from such radioactive materials.

(e) Miscellaneous Sources.

23. Technological development has resulted in the employment of devices which emit radiation. Some of these could give rise to relatively high doses of radiation to the individual, but their limited use results in a very small dose to the population genetically at risk. On the other hand, some of them contribute a relatively small individual dose, but their more general use could be of significance genetically. The use of X-ray shoe-fitting machines constitutes a more significant radiation hazard than some of the sources of environmental contamination.

4. Matters Considered by the National Radiation Advisory Committee.

(a) The Use of X Rays in Medical Diagnosis.

24. The medical necessity for a particular X-ray diagnostic procedure can only be evaluated when all clinical indications are taken into account by the medical practitioner. In the absence of technical advances beyond those which at present appear likely, the use of X rays in medical diagnosis will, however, remain the major contributor to man's radiation exposure if the great advantages the practice provides to his health and well-being are not to be sacrificed. The Committee has, since its establishment, devoted particular attention to this issue.

25. The Committee believes that radiation doses to the individual and to the population as a whole should be reduced without delay by administrative and technical action.

26. The Committee is aware that a growing consciousness to the problem exists among the medical profession as evidenced by discussions by the College of Radiologists of Australasia, by the British Medical Association at its recent Medical Congress and other meetings of medical practitioners and through the medical and scientific literature.

27. Radiation hazards from the use of ionizing radiation in medical practice are at present under review by the Radiation Hazards Committee of the National Health and Medical Research Council. Recommendations will be presented to that Council at an early date. The Committee strongly supports the action being taken by the Radiation Hazards Committee, believing this to be of the utmost importance.

28. The Committee notes that while legislation existing in some States provided for the control of fluoroscopic and therapeutic equipment, it either did not provide for licensing medical practitioners to use X-ray equipment for diagnostic purposes or exempted them from obtaining a licence. The Committee has recommended that the strongest consideration be given to the licensing of such equipment.

(b) Tuberculosis Case-Finding Programmes Involving the Use of Mass Radiography.

29. The X-ray examination of the chest of the apparently healthy is employed in a programme to reduce the incidence of tuberculosis. Radiation exposure from regular X-ray examinations of such a large section of the population might, under poor technical conditions, significantly contribute to the radiation dose to the gonads of the population genetically at risk. Furthermore, irradiation of the bone marrow of those subjected to mass X-ray chest surveys might increase the incidence of leukæmia. The radiation dose per examination to the tissues of interest—the gonads and the active bone marrow—depends on the techniques employed and the protective measures adopted.

30. The Committee has examined the radiation risk in relation to the contributions of this practice to public health and has been assured by the various Tuberculosis Control Authorities that they have already adopted policies aimed at reducing the radiation to those tissues and are progressively taking advantage of the more recent developments in equipment and technique.

31. The Committee formed the opinion that the risk of detectable effects on the population and on the individual from mass X-ray chest surveys is very small indeed and should be accepted at the present time. In this connexion the Committee noted that although modern methods of treatment have effected a sharp reduction in the death rate due to tuberculosis, from a public health point of view the disease is still significant. Cases are still being detected at a fairly uniform rate throughout Australia, and consequently the Committee is in accord with the policy adopted by the Tuberculosis Control Authorities to continue mass X-ray chest surveys in a form that meets the requirements of the health of the community. It recommends that the position be kept under review and that a re-evaluation be made from time to time of the necessity for this procedure in relation to public health.

(c) Radiation Induced Leukæmia.

32. The incidence of leukæmia has risen in all advanced countries during the last 30 or 40 years, and the question has been raised as to whether all or most of this increase was due to the medical use of X rays. The annual incidence of leukæmia in Australia is of the order of 50 cases per million of population, having risen at a fairly uniform rate from just less than 20 cases per million of the population in the early 1930's.

33. Much of the knowledge as to the significance of radiation at low doses (and low dose rates) in the induction of leukæmia is tentative. The Committee has closely examined the available data and concludes, in the light of present knowledge, that even if a direct dose-effect relationship holds, 5 to 10 per cent. of the leukæmia incidence in Australia is the maximum that may be due to the medical use of ionizing radiation.

34. The Committee concludes that some factor or factors other than ionizing radiation play a major role in the increased incidence of this disease, and that these should be investigated in order to clarify the significance of radiation exposure as a contributing factor.

35. As an essential preliminary to any such research programme, it is necessary that the true incidence of each type of leukæmia should be accurately known. Accordingly, the Committee has recommended that all types of leukæmia be declared notifiable diseases and that, in addition, a consultative panel of pathologists should be set up in each of the major population centres to establish diagnosis in difficult and borderline cases.

(d) Atomic Weapon Tests in Australia.

36. At the request of the Atomic Weapons Tests Safety Committee the limiting fall-out levels to be applied in Aus-

tralia during the Antler series of weapon tests held at Maralinga in September-October, 1957, were considered. After reviewing relevant biological data and learning of proposals to monitor the fall-out, the Committee endorsed the Safety Committee's recommendations.

37. During the period of the trials, eighty-six fall-out measuring stations, appropriately located, were operated by the Safety Committee to determine actual fall-out levels. The results showed that fall-out was extremely light and far below the level agreed by the National Radiation Advisory Committee. In fact, the highest radiation dose recorded anywhere in continental Australia from these tests was less than that which would be received by an individual wearing a wrist watch with a self-luminous dial for three weeks. Such excellent results were possible by careful choice of firing opportunities, by use of high towers for supporting weapons, and, for the final explosion, by using the newly developed technique of carrying the weapon on balloons. This latter method proved to be extremely good—the explosion took place far enough above ground level that ground debris was not involved and the radioactive cloud left continental Australia without significant fall-out occurring.

38. From a study of these results and other data obtained by the Safety Committee during earlier weapon tests[1] the Committee can report that the most stringent safety precautions have been applied throughout.

(e) Global Fall-Out.

39. Since 1956 the Atomic Weapons Tests Safety Committee has operated a network of fall-out stations numbering about twenty, which monitor global fall-out on a continuous basis and therefore provide information on background effects. These stations are capable of detecting debris from high-yield explosions conducted overseas, and results obtained during the British Christmas Island hydrogen weapon tests, May 15-July 22, 1957, have been published in full.[2] The experiments showed that the fall-out in Australia from these tests amounted, in the worst case, to less than 0·005 per cent. of the background radiation dose.

40. From this local data and other information available to the National Radiation Advisory Committee, it can be stated that Australia is one of the countries with the lowest total fall-out. The fall-out levels here are several times less than those in the United States of America, and about half of those measured in Canada, the United Kingdom and Japan. The Australian monitoring stations are in continuous operation and the data obtained from them will be published from time to time by the Atomic Weapons Tests Safety Committee.

41. The question of strontium 90 in the fall-out from the testing of nuclear weapons is currently being considered by the National Radiation Advisory Committee. In due course an evaluation of the situation will be made available.

5. Summary of Recommendations of the National Radiation Advisory Committee.

42. In concluding this interim report we feel that it is appropriate to restate the recommendations already discussed, that arose out of our examination over the last twelve months of some of the uses of ionizing radiation in Australia.

(i) Action similar to that taken by certain States in using the Model Act and Regulations prepared by the National Health and Medical Research Council to bring many of the sources of ionizing radiation under legislative control should be taken by the other States as soon as possible (Paragraph 20).

(ii) Radiation doses to the individual and to the population as a whole arising from the medical use of X rays for diagnostic purposes should be reduced without delay by administrative and technical action (Paragraphs 24-28).

(iii) The strongest consideration should be given to the licensing of X-ray equipment to be used by medical practitioners for diagnostic purposes (Paragraphs 24-28).

(iv) The need for carrying out mass X-ray chest surveys in the programme to reduce the incidence of tuberculosis should be kept under review and a re-evaluation made from time to time of the advantages of this procedure in relation to public health (Paragraphs 29-31).

(v) All types of leukæmia should be declared notifiable diseases and a consultative panel of pathologists should be set up in each of the major population centres to establish diagnosis in difficult and borderline cases (Paragraphs 32-35).

F. M. BURNET.
SYDNEY SUNDERLAND.
L. H. MARTIN.
J. P. BAXTER.
E. W. TITTERTON.
DUDLEY A. GILL.
W. P. HOLMAN.
D. J. STEVENS.
J. R. MORONEY (Secretary).

6. Appendix: References to Further Reading.

The foregoing discussion of the relation between the dose and the biological effects of ionizing radiation and of the sources of ionizing radiation is only a brief summary of present knowledge. For more detailed considerations, reference should be made to:

"The Hazards to Man of Nuclear and Allied Radiations", Medical Research Council Report, June, 1956, Command 9780.

"The Biological Effects of Atomic Radiations", 1956, National Academy of Sciences-National Research Council, Washington.

"Leukæmia and Aplastic Anæmia in Patients Irradiated for Ankylosing Spondylitis", W. M. Court-Brown and R. Doll, Medical Research Council Special Report Series Number 295.

A Report by the World Health Organization on Genetic Effects of Radiation, 1957.

"Recommendations of the International Commission on Radiological Protection", *British Journal of Radiology*, Supplement No. 6, 1955.

"The Effects of Nuclear Weapons", June, 1957, United States Atomic Energy Commission.

"Radioactive Fallout in Australia from Operation 'Mosaic' ", W. A. S. Butement, L. J. Dwyer, C. E. Eddy, L. H. Martin and E. W. Titterton, *Australian Journal of Science*, Vol. 20, No. 5, 1957, page 125.

[1] All of this data is in process of publication. A paper describing the measurements made during the Mosaic Trials, 1956, has already appeared in the *Australian Journal of Science*, Vol. 20, No. 5, 1957, p. 125.

[2] *Australian Journal of Science*, Vol. 20, No. 2, 1957, p. 39.

The College of Radiologists of Australasia.

INTERIM REPORT OF NATIONAL RADIATION ADVISORY COMMITTEE.

THE following comments on the Interim Report of the National Radiation Advisory Committee to the Prime Minister (see page 398) have been prepared by the College of Radiologists of Australasia and are published at the request of the College.

The varied interpretation of this report by the Press in Australia has prompted the College of Radiologists of Australasia to summarize the medical sections of this report in order to prevent confusion in the minds of doctors and their patients.

1. The use of X rays in medical diagnosis. The National Radiation Advisory Committee finds it difficult to envisage modern medical practice without them. With due selection of cases and employing modern methods and apparatus, any possible ill effect is overweighed by the undoubted benefits derived.

2. Mass radiography of the chest. The risk is very small indeed and should be accepted.

3. Radiation-induced leukæmia. This is not a significant problem with the controlled use of X rays for diagnostic purposes.

With regard to the recommendation of the National Radiation Advisory Committee to reduce radiation doses, action had already been taken by the College of Radiologists of Australasia. In 1956 it was decided to approach the Minister for Health and ask for the formation of a committee to investigate these matters. This committee had been formed by the National Health and Medical Research Council, and is strongly supported by the National Radiation Advisory Committee.

Out of the Past.

In this column will be published from time to time extracts, taken from medical journals, newspapers, official and historical records, diaries and so on, dealing with events connected with the early medical history of Australia.

TYPHOID FEVER IN SYDNEY.[1]

[From the *Australasian Medical Gazette*, June, 1882.]

AT the end of May there were no less than 46 typhoid cases in the Sydney Hospital, 33 being on the male and the remainder on the female side. At present some of the typhoid cases are of a severe character, but the mortality rate is exceedingly low. This is, in a great measure, attributable to the fact of a number of the cases being in a temporary ward which is exceedingly well ventilated. The directors of the hospital are exceedingly anxious to have the hospital relieved of the pressure which is being made on the wards of the institution, and with that object in view wrote to the Government for permission to transfer thirty convalescent typhoid cases to the Coast Hospital at Little Bay. The outbreak of typhoid fever is not confined to any part of the city or to any district, but seems to have been general in most parts of the city suburbs. Since January last 119 cases of typhoid fever have been received into the Sydney Hospital, of whom 19 succumbed to the disease. A large proportion of the cases which proved fatal were not received until the disease had reached a very advanced stage: 56 of the 119 cases were admitted from the city, 14 from ships in the harbour and the remainder from the country and suburbs.

Correspondence.

DIAGNOSTIC RADIOLOGY.

SIR: I trust, as the B.M.A. Monograph Fund authorities have not seen fit to publish my thesis on the "Genetic Effects of Radiation", that you will find room for this letter. Nature's craze for balance is certainly well demonstrated in the case of Röntgen's rays, capable of doing so much good and yet so much harm. Dr. Harris (M. J. AUSTRALIA, August 9, 1958) is to be congratulated on the careful recording of the exposures made on his leukæmic patient, and one shudders to think how many malignant mutations this unfortunate man may have passed on. It would be interesting to know just how many of the deaths of our young and youngish X-ray workers could be ascribed to leukæmia. Perhaps all of us might with advantage leave requests for autopsy in our wills. In assessing the risks of diagnostic radiology, it is, of course, necessary for scientists to be concerned with the amount of radiation spread over whole populations, but a doctor is concerned with the individual, and wants to know whether or not he is causing Mrs. Jones to originate a long line of aments and cripples. Time is the only certain judge. Dr. J. H. Martin[2] has produced figures illustrating the amount of radiation received by the population from diagnostic radiology in comparison with that from other sources; but his series, based on a survey of patients attending a large public hospital, cannot take into account the bombardment being administered to the public by radiological quacks, both outside and regrettably inside the profession. The amount of radiation to which patients are being subjected by untrained people is simply terrifying. Quite apart from unregistered practitioners, as things stand any doctor can purchase an X-ray plant, "train" some little titbit to take pictures, and proceed to make the machine pay its way. Registration of radiographers is long overdue.

As I see it, after twenty-five years of radiological practice and a study of available world literature, the only way to protect our patients from the dangers of diagnostic radiology is to use the science only when less hazardous means of making a diagnosis have failed. If this principle were adopted, there would no doubt be quite enough trained personnel to go round and to last a long time. Another very necessary reform is an improved liaison between clinicians and radiologists, to avoid the taking of additional films to compensate for paucity of clinical information.

The future health of Australians, threatened as it is by several forms of radiation, will depend, I believe, on whether in this age of commercialization of the profession, we have enough doctors of integrity, wisdom and courage to fight and overcome what in my book I have called the "Threat to Creation". I would dearly like to hope that we have.

Yours, etc.,

Ringwood X-Ray Clinic, MARY THORNTON.
Ringwood,
Victoria.
August 18, 1958.

FUMIGATION WITH DICHLORETHYL ETHER AND CHLORDANE.

SIR: The article in your Journal of August 23, "Fumigation with Dichlorethyl Ether and Chlordane: Hysterical Sequelæ", cannot be allowed to pass without challenging the conclusions of your contributors. On their arrival at the scene of what could apparently have been a tragedy, twelve days after the first employee was struck down, they have tended to arrive at a conclusion that the incident was mass hysteria. The clue to the whole matter would appear to be that there were 40 suspended gas heaters burning in the factory. The second clue was that 60 gallons of a mixture containing 12% of dichlorethyl ether had been sprayed into a confined, cold, wet space which would only permit very slow evaporation of the seven gallons of chlorinated ether into the air of the factory. As the air of the factory, diluted with minute quantities of chlorinated ether, passed through the gas burners, it is elementary chemistry that a certain amount of phosgene gas must be formed. There would, of course, be other by-products of combustion which could have an irritant effect on sensitive skin. On this basis, all of the cases reported could be explained. Some, a minority, could be psychological. However, the majority were apparently the victims of minute traces of a vaporized chlorinated organic compound, freely mixed with oxygen, exposed to high temperatures, whilst passing through gas burners.

The obvious precaution, when using such compounds, is not to allow the air to come into contact with intensely hot surfaces. Chloroform vapour can produce phosgene in the presence of a radiator.

Yours, etc.,

Epping, F. J. COLLINGS.
New South Wales,
August 26, 1958.

A LESSON IN HUMILITY.

SIR: "The mastery of Medicine is beyond the grasp of the best of us." Lest pride, arrogance or just plain "one-upmanship" should debase our spirit, some bygone scholar selected the above warning from that universal light for all mankind, the wisdom of the ancient Greeks.

Perhaps one of your readers could enlighten me (whose education included little Latin and less Greek) as to who selected the five laconic Greek words ("ΠΑΡΑ ΓΑΡ ΤΨΙΣΤΟΤ ΕΣΤΙΝ ΙΑΣΙΣ") thus translated and had them inscribed so prominently on an architrave of the British Medical Association building in Sydney? Moreover, where do they come from?

Yours, etc.,

607 New South Head Road, GODFREY HARRIS.
Rose Bay,
New South Wales.
August 26, 1958.

[Dr. John G. Hunter informs us that the quotation in question was probably selected by the late Dr. R. H. Todd, but that its source is not known. Two other translations have been suggested, (*a*) "There is cure only by the Almighty", (*b*) "From the highest comes medicine".—EDITOR.]

INSURANCE OF MEDICAL PROPRIETARY COMPANIES.

SIR: Many doctors, including some members of the Medical Defence Union, have incorporated proprietary companies in connexion with the conduct of their professional practices. In such cases, the members concerned will, no doubt, desire that so far as possible, they will have insurance protection. The Medical Defence Union wishes to bring the following matters to the attention of members.

[1] From the original in the Mitchell Library, Sydney.
[2] M. J. AUSTRALIA, 1955, 2: 806 (November 12).

1. The incorporation of medical proprietary companies in no way diminishes the individual rights of the doctors concerned to indemnity in accordance with the Articles of the Medical Defence Union, and it is most important in their interests that their membership should be maintained.

2. The Medical Defence Union is at present taking steps whereby it will be enabled to extend to its members the same rights in respect of their medical proprietary companies to indemnity against actions and claims for alleged negligence as they, at present, enjoy as individuals, and these arrangements are expected to be completed at an early date.

3. The extension of the scope of the benefits in the manner intended to be effected will be in addition to all the other rights enjoyed by members of the Medical Defence Union.

4. Apart from the additional benefits proposed for medical proprietary companies, it will be remembered that the benefits afforded to members as individuals extend beyond the mere indemnity against actions and claims for alleged negligence.

Yours, etc.,

B. T. EDYE,
President, New South Wales Medical Defence Union Limited.

135 Macquarie Street,
Sydney,
September 4, 1958.

Post-Graduate Work.

THE POST-GRADUATE COMMITTEE IN MEDICINE IN THE UNIVERSITY OF SYDNEY.

Annual Subscription Course.

PROFESSOR JORGEN LOVSET, Director of the Department of Gynæcology and Obstetrics, University of Bergen, Norway, will be attached for one week, from September 22 to 28, to the King George V Memorial Hospital for Mothers and Babies and will give the following lectures in the Scot Skirving Lecture Theatre, Royal Prince Alfred Hospital: Tuesday, September 23, 8 p.m., "Atypical Forceps Deliveries"; Thursday, September 25, 8 p.m., "Stress Incontinence".

During the week September 29 to October 4 Professor Lovset will visit other obstetrical units in Sydney, including the Department of Obstetrics and Gynæcology at the University of Sydney, the Royal Hospital for Women and St. Margaret's Hospital for Women, and will give the following lectures: Tuesday, September 30, 8.15 p.m., Stawell Hall, 145 Macquarie Street, Sydney, "Active versus Passive Management of Breech Deliveries"; Wednesday, October 1, 8 p.m., Board Room, St. Margaret's Hospital for Women, Darlinghurst, "Atypical Forceps Deliveries".

PROFESSOR F. A. R. STAMMERS, C.B.E., M.B., F.R.C.S., Professor of Surgery, University of Birmingham, and a Member of the Court of Examiners of the Royal College of Surgeons of England, will visit Sydney from September 20 to October 5 as the official overseas lecturer for 1958 of the Australian Post-Graduate Federation in Medicine. Professor Stammers will give the following lectures in the annual subscription course: Tuesday, September 23, 4.15 p.m., surgical seminar, Alfred and Mary Roberts Ward, Royal Prince Alfred Hospital, "Carcinoma of the Stomach"; Wednesday, September 24, 10 a.m., Maitland Lecture Theatre, Sydney Hospital, "Peripheral Vascular Disease"; Wednesday, September 24, 8.15 p.m., Stawell Hall, 145 Macquarie Street, "Prognosis of Peptic Ulcer"; Tuesday, September 30, 4 p.m., Students' Lecture Room, The Royal North Shore Hospital, "Pain in the Distribution of Brachial Plexus"; Tuesday, September 30, 8.15 p.m., Lecture Hall, St. Vincent's Hospital, "Researches in the Department of Surgery, Birmingham"; Wednesday, October 1, 2 p.m., Maitland Lecture Theatre, Sydney Hospital, "Stenosing Cholangitis"; Thursday, October 2, 11 a.m., Assembly Hall, Rachel Forster Hospital for Women and Children, "Complications of Partial Gastrectomy"; Friday, October 3, 2.15 p.m., Lecture Hall, St. Vincent's Hospital, "Mechanical Factors in Post-Gastrectomy Failure".

DR. MICHAEL E. DE BAKEY, Chairman of the Department of Surgery, Baylor University College of Medicine, Houston, Texas, will give the following lecture: Thursday, October 2, 8.15 p.m., Stawell Hall, 145 Macquarie Street, "Some Observations on Surgery of the Aorta and Peripheral Arteries from Experience with 2000 Cases".

Royal Australasian College of Surgeons.

COUNTRY MEETING AT WAGGA WAGGA.

THE New South Wales State Committee of the Royal Australasian College of Surgeons, after the highly successful country meeting at Tamworth in 1957, has organized a week-end country meeting at Wagga Wagga on October 25 to 26. The meetings will be held at Wagga Base Hospital, and the programme will be as follows: Saturday—10.30 a.m., demonstration of cases; 2 p.m., "Intestinal Obstruction", Dr. L. E. Goldsmith and Dr. R. H. Kenny; 2.45 p.m., "Reconstruction of the Hand", Mr. David Dey; 3.45 p.m., "Some Aspects of Endemic Thyroid Disease", Mr. J. Ziegler and Dr. H. W. Austin; 4.30 p.m., "Orthopædic Advances", Mr. R. Hodgkinson.

Any Fellow desiring to attend is requested to notify Mr. J. F. Ziegler, A.N.Z. Bank Chambers, Wagga Wagga, or the Honorary Secretary, Mr. P. J. Kenny, 149 Macquarie Street, Sydney (telephone: BU 3950), as soon as possible. The following information is supplied for the guidance of Fellows: (a) Accommodation should be arranged at Romano's Hotel, Wagga Wagga. (b) Air transport to Wagga Wagga is available by Ansett-A.N.A. The plane leaves Sydney at 7 p.m. on Friday evening, arriving at Wagga Wagga at 9 p.m.; plane leaves Wagga Wagga on Sunday at 8 a.m., arriving Sydney at 9.55 a.m., and at 4.30 p.m., arriving Sydney at 6.30 p.m. All medical practitioners are invited to attend.

Naval, Military and Air Force.

APPOINTMENTS.

THE following appointments, changes, etc., are published in the *Commonwealth of Australia Gazette*, No. 38, of July 3, 1958.

NAVAL FORCES OF THE COMMONWEALTH.

Permanent Naval Forces of the Commonwealth (Sea-Going Forces).

To be Surgeon Captain.—Surgeon Commander Kenneth Charles Armstrong (Acting Surgeon Captain).

To be Surgeon Commander (for Short Service).—Surgeon Lieutenant Commander (for Short Service) Benjamin Crawshaw, D.S.C. (Acting Surgeon Commander).

Appointments.—Nickel Crombie, William Russell Gibson, John Ward Little, Robin Owen Stroud Sims and Alexander Scott Wilson are appointed Surgeon Lieutenants (for Short Service) (on probation), dated 25th March, 1958. Michael John Waterfield is appointed Surgeon Lieutenant (for Short Service) (on probation), dated 22nd April, 1958.

Termination of Appointment.—The appointment of Joseph Brian Shiels as Surgeon Lieutenant-Commander (for Short Service) is terminated, dated 15th May, 1958.

AUSTRALIAN MILITARY FORCES.

Citizen Military Forces.

Eastern Command.

Royal Australian Army Medical Corps (Medical).—To be Captain (provisionally), 22nd April, 1958: 2/270322 Ralph Douglas Fewtrell.

Southern Command.

Royal Australian Army Medical Corps (Medical).—The provisional appointment of 3/50197 Captain W. A. Syme is terminated, 26th January, 1958. To be Captain (provisionally), 27th January, 1958: 3/50197 William Archibald Syme.

Reserve Citizen Military Forces.

Royal Australian Army Medical Corps (Medical).

Southern Command.—Major D. E. Gowenlock is placed upon the Retired List (Southern Command) with permission to retain his rank and wear the prescribed uniform, 21st June, 1958. To be Honorary Captain, 4th March, 1958: Roderick Maller Aitchison.

The following officers are placed upon the Retired List (Southern Command) with permission to retain their rank and wear the prescribed uniform: Major M. M. Perl, 22nd

May, 1958, and Captains A. H. Millikan, 10th June, 1958, and W. J. Rawlings, 22nd May, 1958.

The following officers are placed upon the Retired List (Tasmania Command) with permission to retain their rank and wear the prescribed uniform: *Lieutenant-Colonel T.* Giblin, 17th June, 1958, and Captain T. C. James, 23rd June, 1958.

Notice.

CHILDREN'S MEDICAL RESEARCH FOUNDATION.

THE following is a list of donations received from members of the medical profession for the Children's Medical Research *Foundation in New South Wales.*

Sir N. McAlister Gregg: £500.

Dr. and Mrs. Donald Vickery: £200.

Professor and Mrs. Lorimer Dods: £150.

Dr. M. B. McIlrath, Dr. J. Steigrad, Dr. C. W. G. Lee: £100.

Dr. and Mrs. Paul Tomlinson: £75.

Dr. S. E. L. Stening, Dr. Leonard Rail, Dr. M. Sofer Schreiber, Dr. and Mrs. S. G. Iceton, Dr. M. S. S. Earlam: £52 10s.

Dr. Lindsay Dey, Dr. Norman H. Meagher, Dr. F. M. Hooper, Dr. Kathleen Winning, Dr. D. G. Hamilton, Dr. M. L. Edwards, Dr. and Mrs. T. Nelson: £50.

Dr. G. D. Repin: £40.

Dr. and Mrs. F. W. Clements: £30.

Dr. Murray Maxwell, Dr. Bryan Dowd: £26 5s.

Dr. Pauline H. Gaston, Dr. C. Rivett, Dr. D. P. Clarke, Dr. Douglas Cohen, Dr. A. Thornton Taylor, Dr. J. C. Fulton, Dr. F. C. Rogers, Dr. E. Rivett, Dr. Judith M. Ross: £25.

Dr. E. J. Hardcastle and Dr. H. J. Ham, Dr. G. A. McDermott, Dr. and Mrs. G. H. Puddicombe, Dr. Neil F. Benjamin: £21.

Dr. R. D. K. Reye, Dr. M. R. Clayton: £20.

Dr. A. Assif and Dr. O. Voloshin, Dr. D. W. H. Arnott, Dr. A. Peter Roberts: £15 15s.

Dr. Gregory Blaxland: £15.

Dr. and Mrs. Penna, Dr. S. St. John Grace: £12 12s.

Dr. J. A. Holt: £11 11s.

Dr. Neville Taylor, Dr. J. D. McDonald, Dr. and Mrs. G. W. Steele, Dr. and Mrs. V. M. Coppleson, Dr. M. Cronin, Dr. and Mrs. Hales Wilson, Dr. R. H. Warren, Dr. D. O. Cropley, Dr. R. R. Winton, Dr. G. S. Myers and Dr. V. O. Christian, Dr. G. B. S. Roden, Dr. Wilfred H. Cary, Dr, Mrs. and *Stephen Allworth, Dr. Clyde Davis, Dr. and Mrs. R. E.* Jefferies, Dr. Joan Carroll, Dr. Gerald Field, Dr. N. Waddy, Dr. J. M. Alexander, Dr. G. R. Faithfull, Dr. K. A. Lafferty, *Dr. J. Jeremy, Dr. John Harley, Dr. A. R. Tink, Dr. B. H.* Diamond, Dr. L. A. Jacobs, Dr. Pamela Bulteau, Dr. John Beveridge, Dr. and Mrs. Frank Cross, Dr. H. M. Landecker *and Dr. A. Freedman, Dr. Elsie Leonard, Dr. A. S. Evans, Dr.* D. E. Barton, Dr. and Mrs. E. Manchester, Dr. G. C. T. Burfitt Williams, Dr. Marjorie Gilchrist, Dr. F. Huber: *£10 10s.*

Dr. A. Horsley, Dr. E. Stern, Dr. B. Epstein, Dr. R. N. Powrie, Dr. John Kennedy, Dr. Burstal, Dr. Z. Reiner, *Dr. Colin Cole, Dr. S. A. Bonnette, Dr. Eric Blashki, Dr. John D.* Musgrove, Dr. and Mrs. W. B. Marsh, Dr. Robert H. Vines, Dr. Ruth Godden, Dr. Kenneth Smith, Dr. G. P. Philip, Sir Norman Kater, Dr. F. D. Traill, Dr. J. O. Marel, Dr. G. Gall: £10.

Dr. Judith E. Dey: £7 10s.

Dr. and Mrs. V. Bulteau: £7 7s.

Dr. R. G. B. Cameron: £5 5s. 6d.

Dr. David L. Dey, Dr. Elton Holman, Dr. Peter Fallon, Dr. S. S. Moon, Dr. P. Cappe and Dr. N. Cappe, Dr. Warren Murphy, Dr. N. H. Saxby, Dr. Anna Ziegler, Dr. A. Himmelhoch, Dr. E. S. Finckh, Dr. R. Furber, Dr. Keith Barry, Dr. David Garrett, Dr. F. C. B. McKay, Dr. S. C. Barrett, Dr. Aileen Mitchell, Dr. and Mrs. Blashki, Dr. W. N. *Shand, Dr. and Mrs. M. Schalit, Dr. Henry Seamonds, Dr.* J. M. Mortlock, Dr. H. M. Owen, Dr. Noel C. Newton, Dr. J. R. Allison, Dr. E. Auerbach, Dr. R. B. Taindall, Dr. W. J. *Skinner, Dr. W. F. Simmons, Dr. and Mrs. Alan Owen,* resident medical officers and Mr. Jackson (Ryde District Soldiers' Memorial Hospital), Dr. J. V. Roche, Dr. H. N. *Merrington, Dr. and Mrs. R. A. Don, Dr. T. Nickelburg, Dr.* B. Goodwin Hill, Dr. J. R. Davis, Dr. Z. Enis, Dr. and Mrs. K. MacArthur Brown, Dr. W. G. Shepperd, Dr. A. W. J. Bulteau, Dr. R. Jenoway, Dr. and Mrs. Leslie F. Short, Drs. Morris, Charlton and Finlayson, Dr. H. N. Greenberg, Dr.

DISEASES NOTIFIED IN EACH STATE AND TERRITORY OF AUSTRALIA FOR THE WEEK ENDED AUGUST 30, 1958.[1]

Disease.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern Territory.	Australian Capital Territory.	Australia.[2]
Acute Rheumatism	4(1)	4(2)	7(2)	1(1)	..	..	..	..	16
Amœbiasis	..	..	..	..	..	..	..	..	..
Ancylostomiasis	..	..	..	..	..	..	..	..	..
Anthrax	..	..	..	..	..	..	..	..	..
Bilharziasis	..	..	..	..	..	..	..	..	..
Brucellosis	..	..	..	..	..	..	..	..	..
Cholera	..	..	..	..	..	..	..	..	..
Chorea (St. Vitus)	..	..	..	..	..	..	..	..	..
Dengue	..	..	..	..	..	..	..	..	..
Diarrhœa (Infantile)	..	17(15)	4(4)	..	..	..	..	1	22
Diphtheria	1	1(1)	..	..	1	..	..	..	3
Dysentery (Bacillary)	..	2(2)	3	1(1)	..	..	..	..	6
Encephalitis	..	..	..	..	..	..	..	..	..
Filariasis	..	..	..	..	..	..	..	..	..
Homologous Serum Jaundice	..	..	..	..	..	..	..	..	..
Hydatid	..	..	..	..	..	..	..	..	..
Infective Hepatitis	74(36)	31(14)	4(2)	3(2)	4(3)	..	..	..	116
Lead Poisoning	..	..	..	..	..	..	..	..	..
Leprosy	..	..	..	..	..	..	..	..	..
Leptospirosis	..	..	..	..	..	..	..	..	..
Malaria	..	..	..	..	..	..	..	..	..
Meningococcal Infection	1	2(1)	..	..	..	..	..	..	3
Ophthalmia	..	..	..	..	..	..	..	..	..
Ornithosis	..	..	..	..	..	..	..	..	..
Paratyphoid	..	..	..	..	..	..	..	..	..
Plague	..	..	..	..	..	..	..	..	..
Poliomyelitis	..	1(1)	..	..	..	..	..	..	1
Puerperal Fever	..	..	..	..	..	..	..	..	..
Rubella	..	36(24)	..	15(4)	118(112)	1	..	8	178
Salmonella Infection	..	..	..	..	1(1)	..	..	..	1
Scarlet Fever	13(6)	18(15)	4(3)	5(5)	..	..	..	..	40
Smallpox	..	..	..	..	..	..	..	..	..
Tetanus	..	1(1)	1	..	..	..	..	..	2
Trachoma	..	..	..	..	1	..	..	..	1
Trichinosis	..	..	..	..	..	..	..	..	..
Tuberculosis	12(7)	10(9)	7(4)	4(4)	13(3)	6(1)	..	1	53
Typhoid Fever	..	..	..	..	..	..	..	..	..
Typhus (Flea-, Mite- and Tick-borne)	..	..	..	..	..	..	..	..	..
Typhus (Louse-borne)	..	..	..	..	..	..	..	..	..
Yellow Fever	..	..	..	..	..	..	..	..	..

[1] Figures in parentheses are those for the metropolitan area.
[2] Figures incomplete owing to absence of returns from the Northern Territory.

P. Deakins, Dr. N. D. J. Smith and Dr. L. G. Potts, Dr. J. Niedzinski, Dr. H. Kramer, Dr. D. W. Bruce, Dr. K. Goard and Dr. D. Goard, Dr. P. A. Graham, Dr. and Mrs. A. J. Fallon: £5 5s.

Dr. N. Radford, Dr. M. A. Lurek, Dr. J. A. V. Schofield, Dr. and Mrs. J. Perritt, Dr. Loraine C. Hibbard, Dr. L. Ford, Dr. Rubie Greenberg, Dr. T. Frischer, Dr. K. Fields, Dr. Mary M. Thomson, Dr. K. Singer, Dr. N. Anderson and Dr. P. Anderson, Dr. P. A. Muscio, Dr. H. E. Maderna, Dr. K. McKenzie, Dr. H. Hardy, Dr. P. McReady, Dr. Verne Caradus, Dr. J. McKell, Dr. J. F. Parle: £5.

Dr. C. W. Whiting: £4 4s.

Dr. and Mrs. J. N. Gregory: £4.

Dr. G. C. Spence, Dr. A. F. Musso, Dr. E. Trant, Dr. F. C. McCredie, Dr. M. Sendak, Dr. R. F. Rossleigh: £3 3s.

Dr. Alan Grant: £3.

Dr. Jackson: £2 2s. 6d.

Dr. D. Manners, Dr. S. Levine, Dr. I. Porush, Dr. J. B. Belfer and the Reverend E. Belfer, Dr. D. Morton, Dr. J. B. Phillips, Dr. I. G. Simpson, Dr. M. Christie, Dr. C. E. Southee, Dr. C. H. M. MacMahon, Dr. S. Rosenberg, Dr. H. M. North, Dr. D. R. Reid, Dr. D. B. Travers, Dr. J. M. Wiltshire, Dr. D. D. Bathgate, Dr. Lisoriuro, Dr. P. J. Dawson, Dr. G. Harrison, Dr. Neil Wiles, Dr. L. Cohn, Dr. Muriel McPhillips, Dr. S. Shineberg: £2 2s.

Dr. Robert Hughes: £2.

Dr. E. E. Alchin, Dr. D. Szeps, Dr. W. G. Epps, Dr. C. R. Huxtable, Dr. and Mrs. J. B. Connolly: £1 1s.

Total: £3477 8s.

Nominations and Elections.

THE undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Shand, John Wentworth, M.B., B.S., 1955 (Univ. Sydney), Flat 4, 632 Pacific Highway, Chatswood, New South Wales.

Gural, Andreas, M.D., 1944 (Univ. Zagreb) (registered in accordance with the provisions of Section 17 (2B) of the *Medical Practitioners Act*, 1938-1958), 9 Helen Street, Sefton, New South Wales.

Gyory, Albert, M.D., 1928 (Univ. Szeged) (registered in accordance with the provisions of Section 17 (2A) of the *Medical Practitioners Act*, 1938-1958), Callan Park Mental Hospital, Rozelle.

Lieder-Mrazek, Michael, M.D., 1950 (Univ. Munich) (registered in accordance with the provisions of Section 17 (1c) of the *Medical Practitioners Act*, 1938-1958), 52 Concord Road, Concord.

Notes and News.

Medico-Historical Club of Sydney University Medical Society.

Professor Stammers, Professor of Surgery at Birmingham, will speak on "Some Famous Figures at Birmingham" on Friday, September 26, at 8 p.m. in the Maitland Theatre, Sydney Hospital. There will also be two short talks given by undergraduates on some aspects of the history of anæsthesia and on Sir Ronald Ross. All are welcome.

Roussel Research Fellowship in Dermatology.

It is announced that Dr. K. V. Sanderson, of Adelaide, has been awarded the Roussel Research Fellowship in Dermatology for 1958-59, tenable at the University of London.

Deaths.

THE following deaths have been announced:

MEAGHER.—John Luxford Meagher, on August 17, 1958, at Melbourne.

BROBEN.—James Alfred Broben, on September 4, 1958, at Melbourne.

Medical Appointments.

The following have been appointed members of the Advisory Committee of the University of Adelaide and the Royal Adelaide Hospital, pursuant to the *Hospitals Act*, 1934-1952: Nominated by the Council of the University of Adelaide, Dr. I. B. Jose; nominated by the Faculty of Medicine of the University of Adelaide, Dr. K. S. Hetzel; nominated by the Board of Management of the Royal Adelaide Hospital, Sir Brian Swift; nominated by the honorary medical staff of the Royal Adelaide Hospital, Dr. M. E. Chinner, Dr. A. H. Lendon.

Dr. I. Dickson has been appointed Medical Officer (Tuberculosis), Chest Clinic, Department of Health and Home Affairs, Townsville, Queensland.

Dr. F. K. Fry has been appointed Government Medical Officer at Mount Morgan, Queensland.

Diary for the Month.

SEPT. 23.—New South Wales Branch, B.M.A.: Hospitals Committee.
SEPT. 24.—Victorian Branch, B.M.A.: Council Meeting.
SEPT. 25.—New South Wales Branch, B.M.A.: Clinical Meeting.
SEPT. 25.—South Australian Branch, B.M.A.: Scientific Meeting.
SEPT. 26.—Queensland Branch, B.M.A.: Council Meeting.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Medical Secretary, 135 Macquarie Street, Sydney): All contract practice appointments in New South Wales. Anti-Tuberculosis Association of New South Wales. The Maitland Hospital.

South Australian Branch (Honorary Secretary, 80 Brougham Place, North Adelaide): All contract practice appointments in South Australia.

Editorial Notices.

ALL articles submitted for publication in this Journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

References to articles and books should be carefully checked. In a reference the following information should be given: surname of author, initials of author, year, full title of article, name of journal, volume, number of first page of the article. The abbreviations used for the titles of journals are those adopted by the Quarterly Cumulative Index Medicus. If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

Authors submitting illustrations are asked, if possible, to provide the originals (not photographic copies) of line drawings, graphs and diagrams, and prints from the original negatives of photomicrographs. Authors who are not accustomed to preparing drawings or photographic prints for reproduction are invited to seek the advice of the Editor.

Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary is stated.

All communications should be addressed to the Editor, THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales. (Telephones: MW 2651-2-3.)

Members and subscribers are requested to notify the Manager, THE MEDICAL JOURNAL OF AUSTRALIA, Seamer Street, Glebe, New South Wales, without delay, of any irregularity in the delivery of this Journal. The management cannot accept any responsibility or recognize any claim arising out of non-receipt of journals unless such notification is received within one month.

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